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THE
ART OF GRAINING

A PRACTICAL TREATISE ON
GRAINING AND MODERN DECORATIVE
IMITATIONS

—OF—
WOODS, LEATHERS, METALS, MAJOLICA, ETC., ETC.
BY FREDERICK PARSONS.

FULL INSTRUCTIONS AND MANY VALUABLE RECIPES,
PROFUSELY ILLUSTRATED.



1895
PRESS OF THE WESTERN PAINTER
CHICAGO.

TT 330

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THE
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PREFACE.

THE "ART OF GRAINING" was compiled in 1890 and then published in Messrs. Cassell & Co.'s English technical magazine, *Work*. The many evidences of its usefulness to British apprentices and painters which the author received at that time prompted its revision and re-issue in *The Western Painter* and subsequently in the present cheap volume form.

In the supplementary chapters various practical issues and processes are discussed, which have special bearing upon modern imitative work and decorative ideas. The illustrations, being limited to effects in black and white, were prepared for and are to be considered only as, aids to the descriptive matter. The supplement of actual painted grounds for graining may be taken as evidence of the useful character of the work and of the practical knowledge and experience of the compiler.

The author's obligations are hereby expressed to Messrs. Cassell & Co. (Limited), London, for reserving to him the copyright in volume form, and also to Harrison Bros. & Co., of Philadelphia, for contributing the valuable painted supplement.

FREDERICK PARSONS.

BOSTON, MASS., Nov. 30, 1895.

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A MODERN APPLICATION OF DECORATIVE WOOD IMITATIONS.

SEE CLOSING CHAPTER OF "THE ART OF GRAINING."

THE ART OF GRAINING.

INTRODUCTORY AND ILLUSTRATIVE—PREPARING WORK—GROUNDS AND GRAINING COLORS.

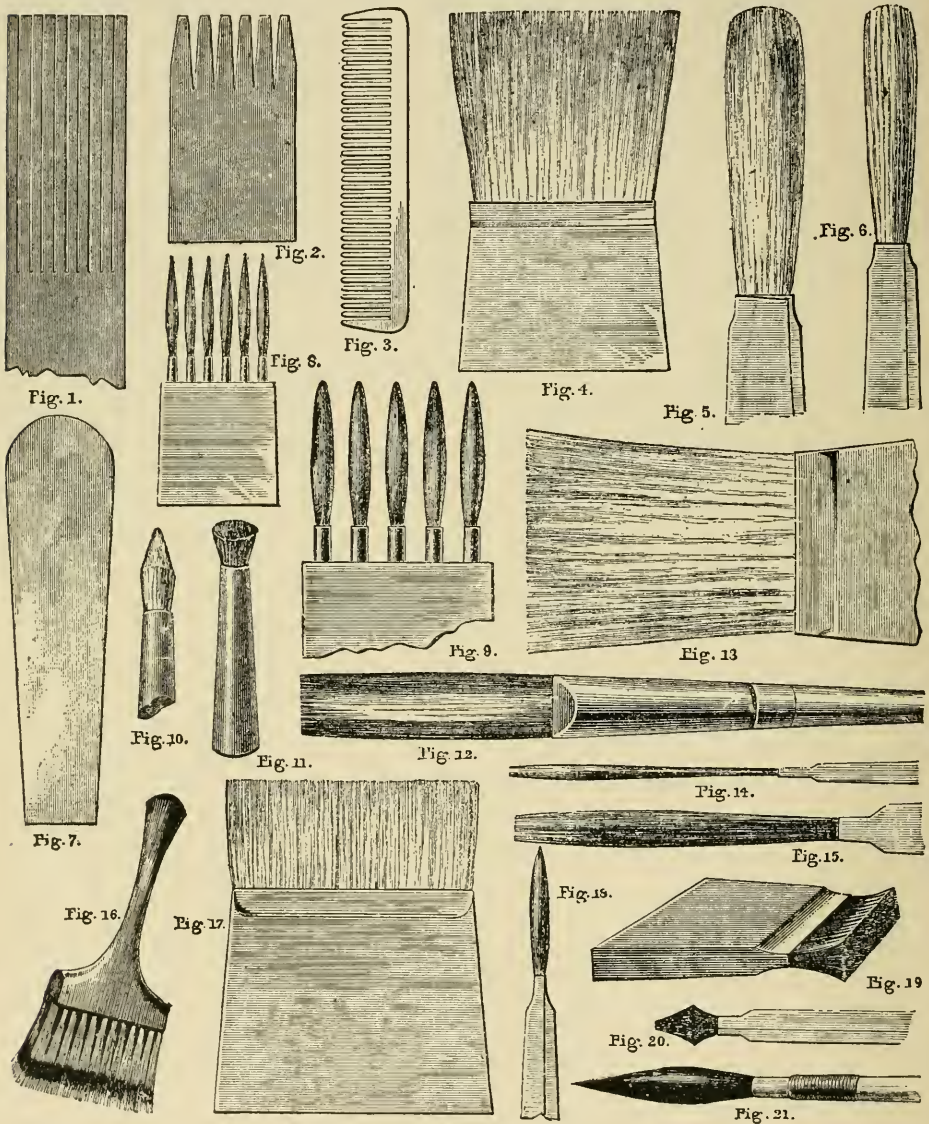


THE utility and art morality of painted imitations, although not a subject of the first importance to the student of graining and marbling, is, nevertheless, sufficiently a question of practical interest to the community at large to warrant its introduction in these pages. Notwithstanding this distinctive branch of house embellishment has been successfully practiced and honored, to the direct knowledge of the trade, for fully one hundred years past in our own country, no subject of a like nature has caused such disputation and outspoken criticism amongst eminent decorative authorities of recent years as the practice and study of such imitations.

Half a century ago, and even still later, the art of graining was in the zenith of its popularity. The successful imitator was looked up to by the operative house painter, and, in fact, by the patrons of his craft as an art-worker—of the lesser order, maybe—but of a branch of decorative painting of a very remunerative nature, and such as even Royalty was pleased to patronize. As evidence of this, there is the still existing marbled imitations which, under the personal direction of the late Prince Consort, were executed upon the walls of the Grand Entrance, or “Marble Hall,” the “Grand Staircase,” leading from thence to the Throne Room, the State Ball Room, and other minor positions at Buckingham Palace, about forty years ago, and at which period the present front of the palace was built. Another notable example of painted imitations comes to mind—the grand staircase of the aristocratic Carlton Club, Pall Mall—a splendid example of painted marbling, which Messrs. Gillow blotted out with “ivory white” paint and Dutch-metal gilding only some six years ago. What a radical change has transpired between then and now! To-day we have THE WESTERN PAINTER offering to the would-be grainer for a few cents the foundation of that craft which a generation ago could only be obtained by heavy premiums of apprenticeship, and the execution of which was jealously guarded from the inquisitive gaze.

John Ruskin's much-quoted dictum, that “there is no meaner occupation for the human mind than the imitation of the stains and striæ of wood and marble” has, unfortunately, been a potent force in lowering graining and marbling from the exalted position it had obtained at the period mentioned. Until these uncompromising words went forth to the “community

of refinement and art-culture" who hold him as the exponent and high priest of all that is true and beautiful in art, no very weighty opinion denouncing such imitations is recorded. From the earliest known times of its introduction and use, the value of this branch of house painting, which can



TOOLS USED IN GRAINING.

Fig. 1.—Steel Comb. Fig. 2.—Leather Comb. Fig. 3.—Comb for Overgrainer. Fig. 4.—Mottler. Fig. 5.—Side View of Thick Mottler. Fig. 6.—Medium Mottler. Fig. 7.—Thumb-Piece. Fig. 8.—Sable Overgrainer in Tubes. Fig. 9.—Hog Hair Overgrainer in Tubes. Fig. 10.—Maple-Eye Shader. Fig. 11.—Dotter. Fig. 12.—Veining Fitch. Fig. 13.—Thin Oak Overgrainer. Fig. 14.—Thin Oak Overgrainer, side view. Fig. 15.—Medium Overgrainer, side view. Fig. 16.—Badger Softener. Fig. 17.—Hog Hair Mottler. Fig. 18.—Hog Hair Mottler, side view. Fig. 19.—Camel Hair Mottler. Fig. 20.—Side View Burnt Edge Camel Hair Mottler. Fig. 21.—Goose Sable Pencil.

combine so admirably utility with embellishment, had, indeed, been fully acknowledged and established ; and had this sweeping condemnation been penned by a writer of less eminent ability and fearless individuality as an art critic than Mr. Ruskin, there is little doubt but that its proper sphere of decorative popularity would not have been in the least affected thereby. Coming as it did, however, from one whose judgment on most art matters is one to “conjure” with, the results were soon made evident, inasmuch that it soon became *fashionable* to decry that which was previously applauded, and the skilled and clever imitators of the metropolis especially found their occupation almost gone. “Old things have passed away !” became the cry of the unthinking following of this master mind. Even, as in some instances, where the architect or decorator was not averse to its introduction in a building, it rarely happened that the client—if a person of advanced knowledge and “art-culture”—would, himself, countenance so flagrant an exhibition of “artistic ignorance.” Herefrom, then, to a great extent arose the disfavor accorded this imitative art, and which has continued, although to a less extent, down to the present day.

The authoritative decorators who uphold graining and marbling number amongst themselves, however, men of eminence, not only as writers upon art, but far more so as practical workers, than even Mr. Ruskin. For instance, we have the valuable opinions of both the late Sir Digby Wyatt and Owen Jones—of “Grammar of Ornament” fame—that such imitations are permissible and commendable, provided they are introduced in situations consistent with utility and common sense ; that is to say, where the genuine article could properly be used. That this is but a rational view of the matter no unbiased person of intelligence will deny, since, if the use of graining and marbling be objected to—notwithstanding fitness or merit of execution—solely upon the principles of being imitations or “shams,” the argument will carry one into most absurd extremes. No staining of simple deal or pine to imitate a more costly or pleasing wood ! No cast plaster imitations of carved stone-work ! No putty composition or papier-mâché enrichments to the surface of apartment or furniture ; not even to embellish a mirror frame—lest soon poor creature may be deceived into thinking it is genuine carved work ! The amount of pleasure that may be derived from the beauty of the ornament is not worthy of consideration in such work : so, at least, appears to be the creed of the “anti-sham” party. Gilding a picture frame or similar ornament must also come under condemnation, since where lies the difference between so imitating a carved surface of metal and covering a wall with an imitation veneer of marble ?

An extract from the *Architect*, published some years back during one of those periodical occasions at which this question comes to the front, offers so suitable a closing judgment upon the controversy herein considered, that I am tempted to quote it—with the promise, however, that quotations shall not hereafter be substituted for that personal knowledge and experience of

my theme which, I am aware, readers of THE WESTERN PAINTER expect and look for. "Graining and marbling, of course, are quite an inferior art to veneering, and, to speak plainly, are more directly a make-believe. A slab-slate table, for instance, enameled to imitate Aberdeen granite, has been known to deceive for more than a moment the expert eye of the Aberdeen stone polisher; and it is quite a common thing for a sufficiently subdued imitation of satinwood or mahogany to be mistaken for veneer, or an unpretentious panel of griotte or malachite for the real marble. So cleverly, indeed, do grainers accomplish their work—when they permit themselves to operate with due reserve—that vast surfaces of wall, as in Buckingham Palace and Stafford House, are found paneled out in the likeness of costly materials with such excessive liberality and faithful resemblance as to create in the mind of a modest stranger the feeling that he is being made a fool of. Nevertheless, for common woodwork in a common house—setting aside for the moment the fashion of green paint and other sad colors which happen to be in vogue—what can be more satisfactory than well and discreetly executed wainscot? Let us bear in mind one thing that seems to be quite overlooked at present. Why is a woman's cotton dress printed with a pattern? Not for the sake of the decoration—a plain color would often be preferable—but for the simple purpose that it shall not 'show the dirt.' The object of graining a door is, in like manner, that it shall not be too readily soiled and stained. Our popular color decorators know only too well how far this vulgar consideration applies to the melancholy tints of painted woodwork which it is their function just now to make supreme. Perhaps we may put the case of graining and marbling thus: When the imitation is too pretentious for possibility, it is no better than the too majestic mimicry of the stage, where the jewels are glass and the gold tinsel; but so long as it kept within the limits of common sense, for the mere purpose of producing a decorative finish by confessed imitation, the better that imitation is the more graceful is the effort of workmanship, and the more to be encouraged as a thing that ought not to become a lost or even degraded art. As for the varnished deal-work now so common (in every sense), although it would be quite an error to disparage it in principle, one may safely ask whether, in order to make it really presentable to a fastidious age, it does not require much better workmanship than is customary, and better material than it would pay to use.⁴

The Stafford House imitations of marble, I may here mention, are not of the ordinary painted nature, as the above able writer appears to class them, but consist of a kind of imitation *veneer*, known as *scagliola* process. This noble building, the town residence of the Duke of Sutherland, is noted for possessing a grand hall and suite of State apartments which compare favorably with any building in London, those of Buckingham Palace in some respects not excepted. The hall and staircase to which the writer evidently refers is a magnificent piece of work. Some idea of its imposing

aspect may be gathered from the fact that it occupies, on a rectangular base, the whole of the center of this mansion. Its height from floor to roof is about seventy feet, and it is computed that a thousand foot soldiers can be placed upon the ground floor. Its connection with my paper will be fully justified when I explain that the greater portion of the wall surfaces and the massive Corinthian columns of this staircase are all decorated with the "scag," marble imitation. Thousands of square yards there must be, and a grand effect it gives, being moulded and paneled out, and with immense oil paintings in the center of the wall flanks. I believe it is without a rival of its kind in the kingdom, and as a noble example of imitative work its existence is one of the best answers to John Ruskin's tirade that the student of such work can find comfort and encouragement in.

Grounds for Graining and Graining Color are terms denoting two very important factors in connection with the imitation of woods, the meaning and practical working of which the student must thoroughly master before he endeavors to produce the features and markings characteristic of any specie of wood. The "ground" is a technical term involving two distinct ideas—namely, *surface and color*. A properly prepared and painted *surface* should be free from grittiness, coarse brush-markings, dents or excrescences, and should present a smooth and hard appearance. The amount of *gloss*—dependent upon the proportions of linseed oil and turpentine used in mixing the grounding paint—is scarcely a matter of strict rule, but rather a consideration of circumstance and the personal preferment of the grainer. Some skilled workers advocate about three parts of linseed oil to one of turpentine, whilst others fully practiced in the work use equal proportions, or even the reverse of those first mentioned. The student may with advantage bear these points in mind: Where oil-graining with steel combs is used, the first named, "hard-gloss," is the best. A dull gloss is more pleasant to work upon in graining by water or distemper process; the water color has more affinity thereto and does not "cess" or run off. For the best class of this distemper graining I, personally, prefer a dull gloss, in which imitations, however, two coats of varnish are necessary for a good finish. On the other hand, there is a distinct advantage in using a hard oily ground for water graining, since the oil has a considerable binding nature upon the pigment (when the water has evaporated from the work), and, consequently, one coat of varnish will "bear out" much better upon this latter than upon work executed upon a dull paint. In no case can a good "ground" be obtained with dead or "flatting" paint, for there must always be sufficient oil in the color to allow the paint to be thoroughly spread and lightly "laid off," and hence ensure the above quality of freedom from coarse brush-markings. As to the *color* of the ground employed, this, of course, is principally defined by the wood we are about to imitate, whether oak, mahogany or maple, and so forth. Beyond this leading fact, however, there is a wide range of knowledge to be acquired, by careful observation and experience, ere the student can correctly judge the combined effect of the two distinct

factors, *ground color* and *graining color*, when manipulated together in the likeness of a wood.

Properly Prepared Graining Color should be characterized by two distinct qualities. Firstly, that of *working freely* and cleanly, not only from the brush whilst being spread, but during the subsequent manipulation. Secondly, that correct and *particular color* combined with the transparency of the pigment, which, when superimposed upon the "ground," shall imitate the color of the genuine polished article. This matter of combined color effect must be thoroughly grasped by the mind of the would-be grainer, since it is the chief working principle upon which the imitation of the wood is based. It is no uncommon occurrence for a writer upon such kindred subjects as painting and graining to be asked for directions to make "graining paint"—that is to say, an opaque "body" mixture, which shall give the appearance, without the two distinct "grounding" and "graining" processes, of oak wood. A little study of the above will show that this is impossible. So soon as *white lead* is mixed with the pigments from which the graining color is made the transparency and richness of the latter are practically nullified, whilst the graining color alone, being only of the nature of a *stain*, lacks the preservative and protective qualities of a white lead or other "body" preparation.

The Preparation of Woodwork for Graining is a matter here calling for our attention. Although the imitation of oak is very often adopted for woodwork that is very rough and imperfectly "gotten up" by the joiner—as much on account of the figure "taking the eye off" this defect as for the serviceability of the graining—a smooth surface and ground are a desideratum. The "filling up"—that is, making level, of such poor woodwork is a matter that must be relegated to a future series of papers; but, given a fairly good door, the following processes will ensure for us a satisfactory ground for working upon. The door should first be lightly papered, unless the joiner has done it for us, with No. 1½ sand-paper, and then thoroughly brushed down with the dusting brush. The knots in the wood are then coated thinly once or twice, according to the nature of the knot, with "shellac knotting" composition, the most transparent of which is the best. This dries in a few minutes, when the work is coated with priming made from three parts white to one part red lead, one-tenth in weight or bulk of paste or liquid driers added, and the whole diluted to a thin paint with three parts linseed oil to one part, or less, of turpentine. When dry and hard, the second coat is made of an oily nature also—say one-third of turpentine to two of oil. This should be used "rounder," or thicker, and be made from white lead and driers, but stained a few shades darker than the desired ground, and which latter we obtain by the third coat. It should always be borne in mind that any colored paint will cover far better upon a previous coat a *few shades darker* than if the reverse is tried. Suppose we are desirous to imitate light oak—that is, new oak, without any arti-

ficial darkening—our second coating may advantageously be used of the depth of color given by the real oak wood. The ground color, in this case the third coat, and which is the least number we can prepare new work with, will then be decidedly lighter than the second coat, and will cover much better than upon white paint. It may be advisable to mention that any nail holes should be “puttied up” after the priming, when it is advisable to let the work stand a day before painting again. Paint should always be strained before using, and the work lightly papered down and dusted previous to each coating. The pigments required for staining the white lead paint to the required ground color is a matter governed by the color of the wood we are imitating.

Samples of the Genuine Woods are equally as necessary to the study and practical proficiency in the imitative arts for copying from as are alphabets for the practice of sign writing. The graining of figured oak is very analogous to hand writing, so much so, indeed, that if an employer has several good grainers working for him he is easily able, if himself a practical man, to say which of them has executed a piece of work, just as an accountant can distinguish between the handwriting of his half dozen clerks, all writing a good hand. For the correct reproduction of oak figure especially, the necessity is a very imperative one. The student of graining can not do better than invest in a *picked* sample of panels of such woods as mahogany, satin-wood, maple and walnut. As they will be of life-long value, have them cleaned up by an expert hand—although there is no reason why the student should not *polish* his panels, and at the same time *well study the characteristics of each wood*. Respecting the oak pattern, it is the better plan to purchase an extra solid piece of good figured oak—for this reason, that after mastering the growth and nature of the “lights” or cross-markings of one sample, we can get a friend to take a thin shaving off the surface, and thereby obtain for us another aspect of the natural growth to imitate. It is one of the peculiar charms of figured oak that with every planing of a panel some variation in the figure is apparent, a fact which the student should take advantage of.

The Accompanying Illustration of Grainers' Tools represents a collection required for the ordinary imitative processes, to be hereinafter explained. Their cost and particular use will be briefly indicated in the next paper, and will be further fully considered as each tool is brought into its proper use. Other tools and devices will be illustrated and referred to in these pages. In my next article the graining of figured oak by the ordinary oil process will be described, and following this, all varieties of oak graining, walnut, mahogany, maple and other decorative woods, will be carefully and practically treated. The “present day” and artistic value of graining will be duly considered, and useful papers, interspersed amongst the above, will be given on graining furniture, plain staining and varnishing, inlaying and decorating with woods generally.

CHAPTER II.

GRAINING QUARTERED OAK IN OIL COLOR.



THE PRECEDING CHAPTER on this subject I considered the necessary qualities of both "grounding paint" and "graining color," and also briefly indicated the preparatory work required for new woodwork which is intended to be grained. The main working principle embodied in the art of graining—namely, the manipulation of a transparent graining color over an opaque and solid surface of paint, whereby two distinct processes are used to obtain one complete color effect—was also therein explained to the reader; whilst the possession of good samples of the woods to be imitated was urged upon the student as a matter of primary importance.

The tools required for graining oak in oil color were shown in the illustration accompanying the previous introductory paper. I do not purpose herein to occupy ourselves with the whole of the brushes represented in the above, lest the quantity and variety should confuse the learner, but prefer to make the student familiar with the tools as the occasion shall arise for their use. Assuming, therefore, that the practically inclined one has secured a good specimen of English oak, and also a suitable piece of painted deal or pine upon which to practice, we will turn back to the engraving of grainers' tools, and I will particularize those required for present needs, and further, briefly advise as to their size and cost.

A variety of *steel combs* is indispensable to graining oak, and these can be purchased either separately or in a set of different sizes and degrees of coarseness. They are sold singly, by the inch, in sizes from one to four inches in width, and are made with six, nine, twelve and fifteen teeth to the inch. The sets, as usually retailed, consist of three combs of one, two, three and four inches, and each size is made up by coarse, medium and fine combs. They are retailed in a shut-up tin case at \$1.00 to \$1.25, while 5 to 6 cents per inch, in width, is charged for loose combs. As a good set of steel combs will last a lifetime, I advise the purchase of such in its entirety; where, however, the cost stands in the way, let the learner invest in four-inch combs of three varieties and a couple of small sizes. The second description of comb I have depicted is of leather; these also can be obtained in varying sizes and degrees of coarseness. India rubber, gutta percha, and

even suitable pieces of cork, can be utilized for cutting graining combs; but, although all of these materials have special characteristics which an experienced grainer can readily turn to practical account, the learner is advised to content himself with machine-made steel combs and two or three coarse leather ones. These latter can be purchased at any large dealer's, and the price, per inch, is about the same as for steel combs. Comb Fig. 3 takes a more familiar shape, and although not absolutely indispensable to graining oak, it is advisable to invest 10 or 15 cents in this article. They are purposely made for dividing the long hair of a thin overgrainer (Fig. 13), when charged with water color, into separate fine divisions. Turning to the brushes, one of the most expensive of the grainer's tools, the *badger hair softener*—or "badger" it is usually termed—must be noticed. Like a good set of combs in the hands of a careful worker, this brush will also last, if not exactly one's lifetime, a great number of years. This is a serious item of expense, and one which cannot be substituted for a cheaper article. A $3\frac{1}{2}$ or 4 inch badger of the *finest* quality costs from \$3.00 to \$3.50, and the cheapest reliable quality of a good maker's badger is marked from \$1.50 to \$2.50. The latter sum should procure a sufficiently good article for his purpose if the learner is careful to purchase a tool bearing the name of a good maker, such as Gerts, Lumbard & Co., John L. Whiting & Son Co. or F. W. Devoe & C. T. Raynolds Co. One word of warning here: do not be tempted by a retailer of German rubbish into buying a so-called badger, the stocks of which are ebonized, and with a thin ornamental plate of white bone next the hair. These goods are sold at about half the price of a good badger brush. The hair in them, which is comparatively little, has scarcely any "spring," is of varying length, and they are practically useless for "softening" graining work. Whatever they are made for, there is one purpose they fulfill capably—I personally recommend them to lady clients for dusting the *bric-a-brac* of their drawing-rooms. A couple of *overgrainers* of three or four inches in width, as shown in Figs. 13 and 15 in the illustration shown in my previous paper, will be a further very useful present investment; and a *thin hog hair mottler* (Fig. 17), about two inches wide will, complete the equipment of graining brushes proper. The careful cultivation of the thumb nail of the right hand has nowadays been substituted by a piece of thin bone of similar shape, termed a *thumb-piece* (Fig. 7). This, when covered by a piece of soft linen rag, is far more pleasant than one's nail to work with, and the "lights," as the cross-markings of the oak figure are called, can be wiped out as naturally and cleanly with the thumb-piece as by the earlier and more primitive method. The cost of the overgrainers will be from 40 to 60 cents each, the thickest kind (Fig. 15) being the most useful for oak. Fig. 17, the thin, or *chisel-edge mottler*, which will be very useful later on for graining mahogany and satin wood, will make a call for another 25 cents, or thereabouts. The "thumb-pieces" are made in several sizes, costing but 5 or 10 cents each. Besides grainers' tools, the student

will require a brush to spread his oil graining color. A medium-sized sash tool will answer best for the practice-board; but a nicely worn-in paint brush and tool are necessary when any quantity of work has to be covered.

The mixing of "graining color," and the nature and proportion of its constituent parts, will here require some consideration; and as this portion of my paper will bear equally upon mixing all shades and colors of graining paint, it requires the learner's attention and study. The pigments, or material colors, used with fluids in compounding oil graining color are of a transparent or semi-transparent nature, the chief of which are known as *Terra-di-Sienna*, or *Raw Sienna*, *Burnt Sienna*, *Raw* and *Burnt Turkey Umber*, and *Vandyke Brown*. These colors are prepared, finely ground, in linseed oil, and can be purchased at any retail paint store. Linseed oil and oil of turpentine are mixed with the pigments, and the addition of a drying agent—used in proportion to the natural drying qualities of the pigment and the circumstances of the work—completes the process.

The megilphing of oil graining color is a matter here requiring some attention. Any person who knows the meaning of the word "graining" is also aware that the combs I have previously described are used for imitating the grain, or pores, of the wood. Now, to ensure that when the work is combed the effect thereby obtained shall be permanent, some means must be adopted to counteract the spreading nature of the linseed oil. Notwithstanding such a recommendation may be bad from a theoretical point of view, I may say that the action of a drying agent alone, used in excess of the amount required to *dry* the mixture, is sufficient for the purpose of megilphing graining color. This is the plan adopted with the bulk of all ordinary and cheap oak graining. Thirty years ago, when a journeyman painter's wage in England was about \$5 a week, a couple of hours spent in mixing a pot of graining color—preparing and dissolving beeswax, mixing lime water, soft soap, or such like articles—was not considered "unnecessarily long;" but to-day the worker is expected to "knock it up" as quickly as a pot of white paint. Mr. Ruskin's tirade notwithstanding, there are still occasions when a thoroughly good and enduring piece of oak graining is demanded, such as may be required to stand for half a century, and in the execution of which neither pains, time, or material may be grudged. In such an instance the addition of a proper megilph is a decided advantage. No assistance would accrue to the student were I to detail herein the many different preparations which have been used for this purpose. That which is generally acknowledged to be most convenient and satisfactory is a preparation of beeswax. A few ounces of genuine wax—not the paraffin-adulterated article—should be scraped into shreds and thoroughly dissolved and mixed, by the application of heat, in linseed oil. This quantity will be sufficient for five or six pounds of graining color, or, as the mixture is more a fluid than of a solid nature, the subjoined *proportions* may be most conveniently stated:—Add to the dissolved beeswax one pint of each linseed oil

and oil of turpentine, about one gill of "terebine"—liquid dryer—and the pigments, ready-ground, in oil which are required to stain the mixture the desired color. When wax is used for this purpose, the worker must take every care to thoroughly mix it with the fluid, otherwise, excess of wax on any portions may prevent it properly drying. It should always be remembered that the province of this substance is not to dry the mixture, but solely to make it more amenable to the dividing and wiping-out action of the combs. Patent, paste or liquid dryer must still be added for oxidizing the linseed oil, and where Vandyke brown is used a *double* proportion of dryer to that given above should be taken, since this pigment is a very slow—or, as it is termed, "bad"—dryer. The best umbers, on the other hand, are good drying pigments, and require less drying agents, whilst the siennas require the full proportion I have given.

Graining color for ordinary purposes is best made with about equal parts of oil and turps, one-eighth, of the whole bulk, of best dryers, and the addition of pigments; burnt umber usually suffices to obtain the desired depth and tone of color. In a subsequent paper I hope to give instructions for mixing "grounds" and "graining paint" for every *color* and *shade* of oak. The above are considerations applying chiefly to the *nature* and *mixing* of all oil graining paint; whilst, when describing the imitation of the many varieties of oak *color* now in use, it will be necessary to notice more fully the pigments previously enumerated.

The reader being now, to an equal extent, familiar with the tools required and the preparation of the "ground" and "graining paints," we will turn our attention to a definite description of imitating the grain and figure.

To Grain Light or Wainscot Oak—A specimen of which, it is presumed, the student, as well as the writer, has before him—we require a light buff or cream color grounding paint. The only pigment necessary for staining our white lead paint to the desired tint is *yellow ochre*, ground in oil, sufficient of which is added to make the paint a *decided* cream color. Some half a dozen distinct depths of light oak can be well imitated upon grounds made from white lead and yellow ochre alone; but beyond a certain range of color the ochre gives somewhat raw and crude effects. The best pigment for staining the graining mixture we are going to use over our light oak is *raw Turkey umber*. If the raw umber cannot conveniently be obtained, ordinary burnt umber will do. The former gives results nearer in color to the new-looking oak, for which burnt umber is too "warm." Having prepared our color according to the previous directions, and using plenty of dryers therein instead of megilphing it, it is necessary now to well "work in" the paint tool we use for spreading—that is, by stirring and scraping across a knife, to get the color properly into the brush. As our graining color, if properly mixed, is scarcely thicker than a "wash," very little is necessary to cover the practice-board—which we will suppose is about 24x11 inches.

The tool is therefore well scraped out, and then our panel is spread. Care should be taken to rub the color out comparatively *bare*, and the learner should rather try how little he can use of his color to "rub in" the board, as it is termed, than *vice versa*. Graining color is always "laid off" the way of the grain, and it naturally follows that when a door is being covered the figure and grain should always be in keeping with the constructive divisions, and therefore such as we should find in a good solid oak door. Although careful and even spreading and proper "laying off" with the paint brush is sufficient for all ordinary work, it is often advisable to get the color more perfectly distributed by finishing with the "stippling" process. As the student must *aim* at first-class work only, we will stipple the practice-board with the "badger," and obtain a coating free from any brush marks. But here, a few words of theory.

In all branches of imitative work, and notwithstanding *perfect* imitation is thereby implied, a certain degree of conventionalism is usually apparent even in the best examples. This is the case with graining, since a "master in the art" will often execute a grained door the *figure* and *arrangement* of which may exhibit more symmetry and balance in its entirety than many doors of the solid wood will show. There is no pretence of "teaching Dame Nature her business" thereby, but simply this: The grainer produces an imitation of that which, as he has learned by studying and copying the natural principles of the tree's growth, *may* be found in reality. The worker in wood, however, although he appreciates the beauty of its grain and figure, cannot sacrifice every other consideration to that, and use only those portions of a tree which will make an ideal door—hence, although perfect in construction, it may be, as suggested, inferior in some respects to the imitation. My reason for this digression is to impress upon the student that a solid oak door is not *always* the ideal to work up to, but that, whilst we are imitating, let such imitation contain as much beauty of growth and balance of parts as may be found in the best specimens. This will further explain matters should the learner fail to see the exact interpretation in his own specimen of my written instructions: the natural characteristics of both sources will, however, be identical.

To return to the practice-board, and which we will treat as a door panel, now ready for "combing" and "figuring." A little study of the real wood will show that there are two features to be copied—the grain which runs lengthways and the figure, or "lights" of oak, as it is termed, which crosses the former. A little more observation will teach us that the "grain" consists of an arrangement of dark pores of the wood, some finer and closer, and others long and coarse, and that where the figure is there are no dark pores, but a very fine grain, which seems to underlay the whole effect. A good panel of real oak will show according to its growth a coarse grain upon the one side, which graduates into a finer and then into the figured portion. To imitate this, we take a three-inch coarse comb, preferably leather, and

placing the edge against the left-hand side, draw it firmly once down the panel. A medium steel comb is then used next to that we have already wiped out, and this is carried about half-way across the width. If carefully done, we have now a graduated series of regular lines from which the graining color has been drawn off. But this is not much like the grain at present. We now take a fine or medium wide steel comb, and starting at the same edge, we cut the lines into "pores," as it were, by either of two methods—we may draw the comb at a slight angle regularly across the coarse combing, or we may, and very successfully with practice, make the comb execute a cross, "wavy" action, and obtain a similar effect. Having cut the first combing up into pores, or grain—hence "graining"—we carry the fine combing across the panel, but keep it, upon the right-hand portion, quite subdued in effect. Combing must always be cleanly and carefully done; the work must start right at the top and be carried quite to the bottom—simple enough on the practice-board, but not so easy on a moulding-framed panel. Wipe the combs, as they are used, on a piece of old rag, free from "fluff," and practice to get a full and regular pressure over the wide comb, which will ensure clean combing.

Now for the *figure*. We take a piece of old linen rag and double into several thicknesses; our thumb-piece is now put within it and then under our right-hand thumb—projecting from it sufficiently to occupy the place of a long thumb-nail. With the left hand the ends of the rag are held away from the panel, and this also serves to steady and guide the right hand. Starting from the top, we wipe out the figure, putting in its coarsest markings and broadest lights nearest the right-hand edge of the panel, as it would be in reality. From this side the figure is imitated in varying degrees of coarseness, until its markings, gradually getting smaller and closer, are intermingled with the strong combing of the left-hand side of the panel. No attempt is here made to describe the figure, but rather to accentuate its chief points. The real oak panel or a nicely grained specimen alone can teach the growth of the "lights" of oak. To wipe them out naturally and cleanly is, I believe, the most difficult process the learner of graining must master. In manipulating the thumb-piece and rag, the broad top of the former enables us to take out the thick and "set" lights, and with the thin edge to make the small ones; whilst all the irregular veins of varying shape are made by a combined action of both. In a good panel of oak the strongest figure is never crowded, but nicely balanced throughout. When the figure is completed to this extent, we have to put in "half-tones" of color, found between the veins. To effect this, a clean piece of rag is made into a pad about two inches long, and graining color surrounding the figure is carefully, but not cleanly, wiped or softened out. This process must never be worked up close to the "lights." The desired effect is this: by wiping away a portion of the color to obtain a more transparent appearance, and whilst "softening" the figured part of the panel, we still further help the

contrast of the clean-wiped lights by the shade portion surrounding it. It is only advisable to put "half-tones" between the most prominent "lights." Both in wiping out the lights and the half-tones, the surface of the rag is, of course, continually changed; clean wiping is very dependent upon *clean rag* as well as the practice of the worker. We now, finally, take the *thin hog-hair mottler*, and slightly soften off the veins with a downward touch; this, if successfully done, will give a delicate "woody" appearance to the "lights," and assist them by strengthening the under shadow. The work is now allowed to dry ere it receives the subsequent "overgraining" process. In my next paper I hope to "grain a door," and will endeavor to assist this subject by an illustration of working methods of graining oak in oil.

CHAPTER III.

GRAINING, OVERGRAINING AND SHADING OAK IMITATIONS.



THE student of graining must be prepared to expend a considerable amount of his time and patience ere he acquires proficiency in wiping out the "lights" or figure of oak—at which stage of the imitation the subject was left in the last chapter. Presuming, however, that each evening for a month at least has been perseveringly devoted to this end, and that the worker has so far availed himself of copy, graining panel, and my previous instructions as to be able to imitate the natural characteristics of the wood in some half a dozen different treatments, he may now with advantage turn his progress to practical advantage by graining an ordinary four-panel door. The door, having been carefully prepared and "grounded" in accordance with my preceding papers, it is finally lightly sandpapered and well dusted down.

In *graining a door oak*, it is advisable to use both a full-size paint brush and a sash tool for spreading the oil graining color. If both are nicely "worn in" to a level edge, and providing the graining color has been properly mixed according to my directions, no difficulty will be experienced in spreading the same evenly but barely on the door.

The "rubbing in" of graining color is worked on similar lines as are followed in plain-painting a door. At the risk of repeating, it is, perhaps, advisable to briefly indicate the method. Suppose, my reader, you stand aside, figuratively, and watch an experienced hand for a few minutes. My first action is to get a small wooden wedge, and so fix the door that I can comfortably work on it. Now, the brushes being well worked into the color, and being previously cleaned and free from any white lead or colored paint, I place the pot conveniently to my right, and with the large brush in my left hand in reserve, I start with the tool. We all know that every door must have two edges as well as two sides; one of these edges is always treated with the inside of the door. You see this door opens towards us, into the room, therefore the front edge belongs to the inside treatment. The edge is now first rubbed in, after which I coat the panel mouldings. It is apparent that a little graining color goes a long way, as there is sufficient left in the tool, from "working it in" at the start, to cover all the mould-

ings. Besides the two brushes, you will notice that it is a further advantage to have a smaller one, called a *fitch*, for this enables me to go into the "quirk" of the moulding and to pick out any superfluous color at the mitres, without severely rubbing and forcing the hair of the tool into such recesses. Now I change hands with the brushes, and, using the large one, the four panels are coated from the top downwards. Although I find sufficient color in this brush for one large panel, I must take a "dip" to finish the door. Here, you see, there is a difference from plain-painting a door. When using a body color, we can take a good generous brushful, leaving the superfluous portion against the side of the paint pot; but with

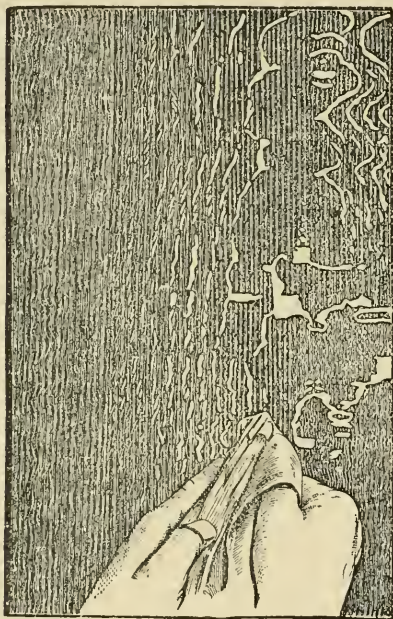


FIG. 22—HOW THE FIGURE IS WIPED OUT.

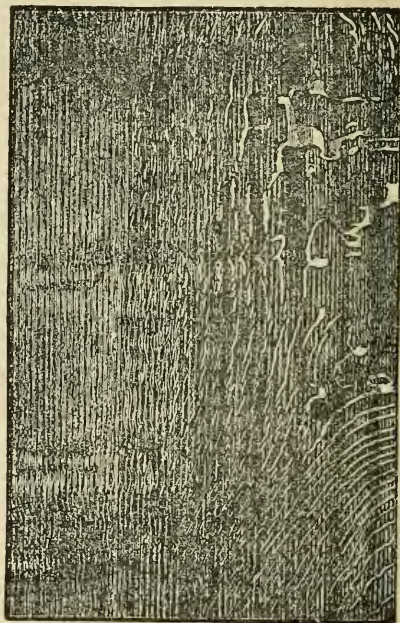


FIG. 23—GRAINING IN FIGURE 22, WHEN OVERGRAINED.

graining color, such a quantity would be sufficient for two doors, and would make it impossible for me to give this one the bare but even coating that is desired. This is a more important matter than it may at first sight appear.

The panels being covered and laid off the way of the wood, from top to bottom, I start with the stile between the top panels, next the top rail, bringing the outer stiles down some distance also. Here, again, I coat the stile between the lower panels, then the wide middle rail, or lock rail; then the bottom rail of the door, and, finally, finish with the long outer stiles, which run the whole length of it. You have seen how, having first spread the color evenly on each portion so that it is all the same depth, I lay it off lengthways, or perpendicularly, just as the wood is used which forms each

part of the door ; and now, having given the mouldings a final "lay off" with the tool, you can bring out your combs and graining tools and start with the four panels.

The varieties of plain combing in oak graining is a matter it will now profit the student to consider here.

Assuming that the door panels have been creditably combed and veined after the manner indicated in the preceding chapter, the learner will naturally inquire, "How should the remainder of the door be treated?" In offering some assistance upon this point—which is one that scarcely any two grainers are entirely agreed upon—I must mention that there appears to be two working principles which stand before any questions of individual choice or experience. The first of these—that the constructive lines and framing of the woodwork must be *rigidly* adhered to—is a matter I have explained in "rubbing in" and "laying off" the color. Second to this, we have to consider it the duty of the grainer to treat the door in such a manner that its *design* and proportions shall be clearly displayed and "set off" to the most advantage.

That the recessed and moulding-framed *panels* are the most suitable portions for the best figured work displayed upon a door no one will question. Such being the case, the woodwork surrounding them should certainly not only frame, but act as a foil thereto. I therefore, personally, must recommend a good variety of cleanly-executed "plain combing" for the bulk of the remaining woodwork. The usual exceptions to this simple treatment are the middle rail, the bottom rail, and, occasionally, the narrow rail across the top. A large proportion of grainers invariably make a practice of imitating a piece of "heart of oak" or sap portion of the wood, across the entire width of the lock rail. The success of this treatment will very much depend upon the manner of its execution. Fully three-fourths of the "sap" (so-called) that is worked in this position consists of coarse ungraceful markings, very unnaturally wiped, and very crudely breaking into the coarse surrounding grain. When, however, a piece of "sap" is neatly and properly executed, I see no reason to condemn its introduction, although it should always be executed with subservient effect to the panels. The alternative treatment of the lock rail is to comb it into grain of a graduated nature, and then to work a little quiet figure thereon—this, of course, being put in across the grain, just as in graining the panels. The latter method is one often applied also to the bottom rail, and is equally acceptable there ; whilst the very coarse grain and sap which is occasionally used on the top narrow rail is less sappy in effect than on the lock rail.

The characteristic markings and growth of the sap, or heart, of oak will well repay the student's careful study, and also his practice in "wiping." I am well aware that many good grainers will never use it. Some will say that as the sap is the least acceptable portion of the tree, the carpenter would seldom put it into a real oak door. This may be right in theory, but

I venture to think the coarse-grained sap is to be seen in a real oak door more often than not. Observation on the student's part will well repay him in such matters. Again, there are some professional grainers, to one's personal knowledge, who, notwithstanding they are able to wipe the lights most naturally, can only make "a poor fist" with the "heart;" and therefore, knowing this, they naturally decry its use. Other experienced workers also contend that only on the thickness, or "returns," of a piece of work

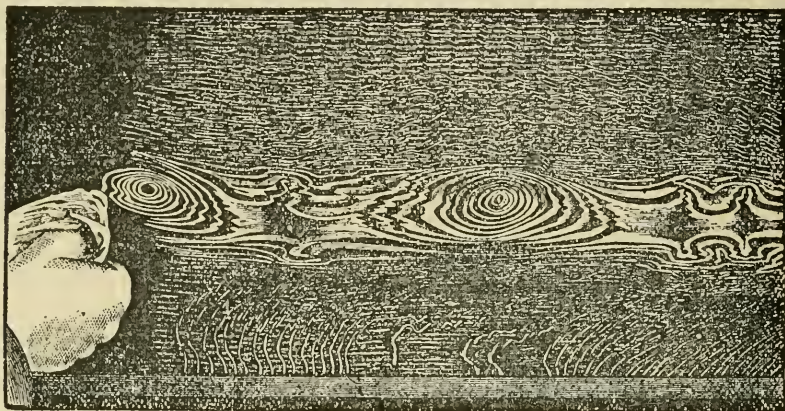


FIG. 24—HOW THE SAP IS WIPED OUT.

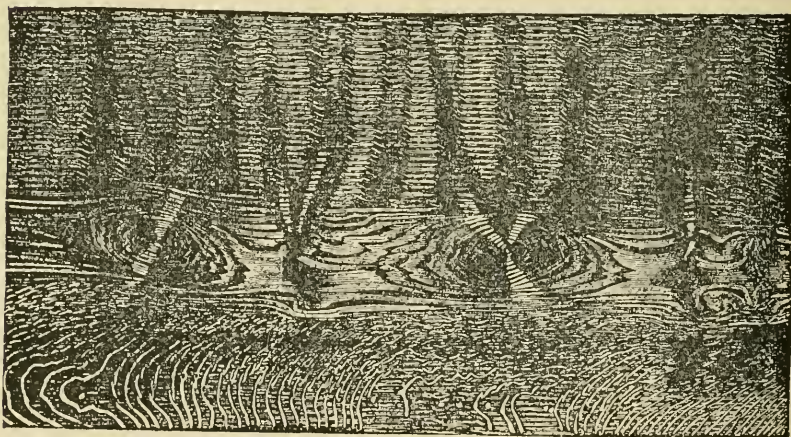


FIG. 25—APPEARANCE OF SAP WHEN SHADED OR OVERGRAINED.

should sap be worked; but this also may not be so acceptable in general practice as it appears on paper, for the grainer who sets himself the task of showing the growth of the wood upon face and thickness requires both exceptional skill and knowledge. Independent of this, I do not think the mouldings of a panel are improved by coarse markings worked *across* their bulk, which would neither assist the contours of the moulding nor give a better effect to the panels.

With this brief consideration of what is most in vogue, and the reason and effect thereof upon the remaining portions of an ordinary door, we will now turn to the completion of our imaginary sample. The graining color I laid off carefully, as you must both remember and practice, cutting up each joint with the brush in a sharp line. Before using the combs, I here take a handy little straightedge, and laying the thin, beveled edge against the joints of horizontal rails with the perpendicular stile, I wipe off, with a clean rag, a little of the graining color from one side. This will further define the joints as they exist in the real wood.

As one specimen of combing effects, I now take a coarse gutta percha comb and draw down the stile between the upper panels, giving it first a straight and then a slightly angular direction. I now go over this with a medium steel comb, and, using it a little out of the upright, obtain a fair effect of coarse combing. The stile between the bottom panels is now similarly worked, but hardly so coarse in grain. The top cross rail is next combed with a coarse steel comb, and then a fine one, which gives a somewhat light effect. Here you see my combs have gone over the limit and on to the outer stile. This must be put right, or, in combing the latter, we shall get a "muslin" marking instead of grain. To this end I place the straightedge up the joint, and with the sash tool, used comparatively dry, I remove the objectionable comb marks by carefully brushing them out. The lock rail next invites my attention. Using a coarse gutta percha comb, I commence on the upper half to wipe out the color, giving the comb a curving movement, and thus varying the width of grain, and suggesting the formation of the "sap," which is worked into it. I now, with rag and the thumb piece, wipe out the heart, working from one knot, or centre, into another centre, according to the growth in nature, which the learner must explore. To finish this, I take a fine comb, and diagonally cut up the coarse grain surrounding the sap, and also use it carefully upon the latter, taking care that there is no harshness of figure or of general effect, and graduating the coarse combing in a natural manner. The bottom rail I now comb in a plain and graduated effect, and content myself with putting in a few simple lights across the top portion. Making sure that my combs have not again intruded upon the outer stiles, I finish the latter by a level combing with the four-inch steel coarse comb and then draw the fine comb in a wavy motion down the entire length. The mouldings finally are combed with a little variety, care being taken, you see, that the mitres are cleanly treated. The door can now stand and dry, when it will be ready for overgraining or shading.

Before leaving this practical stage of the work, I may with advantage indicate some other plain-combing arrangements. If, as is advisable with a learner, he does not try his hand at "heart" upon the lock rail, using instead the graduated combing and simple veining, the whole of the perpendicular stiles might with advantage be treated with the same plain clean

combing with two steel combs. The rails should then be worked with a good variety of combing and veining, and the complete effect will be very much as would appear in real oak, the action of light upon the different ways of the "grain" giving the variety of depth at which we are aiming. In combing a light piece of grain, a "woody" effect can readily be obtained by placing over a coarse steel comb a piece of muslin cloth. A yard of this stuff is a good and useful help to a grainer, but it requires a thorough washing to free it from "fluff" ere it can be used for the purpose mentioned. A piece of rag must always be at hand, and each comb should be wiped after every stroke. Plain combing in itself makes a pleasing and serviceable finish to the woodwork of basements, etc., and can be recommended before much of the "rubbishy" figuring one sees repeatedly in small houses. Practice alone will make the student a good, clean, and quick worker with the combs, in which matter my written instructions cannot, I believe, further aid him.

Overgraining and shading oak is the final process applied to all imitations of oak worth calling such, the object of which is to give more variety of natural depth to the work, and to enrich the whole effect. It is worth noting here that, beyond the ancient associations of the wood, and its beauty and serviceability, the oak has another prominent claim for obtaining the first place in any practical considerations of the imitative art, and this from the fact that the two processes of "oil" and "distemper" are both used in graining it. The preceding part of my paper has been occupied with the manipulation of oil color. In now following the overgraining process, the student, whilst completing his study of oak, will further acquire knowledge and facility of execution such as will materially aid him later on in graining other hard woods, which are usually worked in distemper, or water, pigments.

"Overgraining," as practically interpreted by most grainers, means the application of very weak stains of a pigment, ground in water, upon certain parts of the grain and veining, and in such a manner as the real effects aimed at are displayed in the natural wood. We have previously seen how the grain and figure are obtained by the use of one translucent oil color manipulated upon a solid, opaque ground. It is at once apparent therefrom that no *variety* of depth of color is possible with these two factors only, hence the "overgraining," or *over-shading*, of portions of the oil graining. If we further examine the grain of the real wood, we are easily made aware of what our oil-grained combing now appears lacking in—a variation of shade and a "softening" of some portions of the grain. Beyond color *depth*, it is the province of overgraining to either warm or cool the oil graining, to enrich or to make more sombre, according to our requirements of finished color, different constructive divisions of the door or other woodwork. In order to more simply and practically illustrate these remarks, I will take the required tools for overgraining oak in water, viz: A medium oak over-

grainer (Fig. 15, "Grainers' Tools," shown in the opening chapter), the badger-hair softener (Fig. 16), a small piece of sponge, a piece of wash leather and a partly worn paint tool, and with these finish graining our door. The paint tool, which will answer the purpose of a mottler (Fig. 5) for our present purpose, must be perfectly free from oil paint or grease of any kind.

The water pigments used for overgraining oak are principally Vandyke brown, ivory black, blue black, and occasionally the siennas and Prussian or indigo blue. As I purpose devoting the succeeding chapter to a brief *résumé* of the varieties of oak, and the grounds, graining colors, and pigments used for such, I confine myself here to a description of the *modus operandi*, and of those pigments only which I prefer to use in finishing a door already combed and figured in imitation of very light or new oak. To this end, I take a little each of Vandyke brown and blue black (both purchased ready ground in water), and place them upon the side of a palette (an old plate will answer), and have also at hand the tools just mentioned and a little diluted beer in a vessel. Had I a large amount of work before me to overgrain in water, it would be preferable to stain a quantity of the liquid to the desired depth and color in a vessel; but with only one door side this is not necessary.

Vandyke brown is the pigment most extensively used for overgraining oak, its richness and transparency making it suitable for all varieties. For the new-oak color applied to our door this pigment alone would give our finished work too warm a general tone. I therefore stain a little of the beer with a little blue black and Vandyke upon the plate, then dip the long oak overgrainer (Fig. 15) into the beer, which makes the hair cling together; and here I work the stained liquid into it, which is ready prepared on the plate. If the overgrainer had not naturally formed itself into the two or three divisions of hair, I could easily have given it that effect with the fingers. With the brush well charged, you see, I now place the hair thus divided upon a panel, and draw it down in line with the grain. This shading I prefer to apply rather sparingly down the figured half of the panel, and, as I replenish the brush after each continuous stroke from top to bottom of panel, notice that the hairs must not separate into divisions of too fine a nature, which would give a "liney" effect to the panels. Before the markings have had time to dry, I now take the badger, and, with a gentle "flicking" motion across the panel, ease off the hard edge of each line. Having similarly treated the two upper panels, the shading being only just noticeable, I take the tool, and with an equally thin wash, I put in a few broader horizontal shades upon the lower panels, placing them where the grain has been given any decided curl or inclination. This being softened off at once, the lock rail, with its sap, is next treated. The sponge is now dipped into the stained wash, and then, well charged, is "dabbed" against the knots, or center of the heart. Before the color can run down I bring the badger into play, and by it, with a facility acquired with practice, the

color is manipulated into a patch, with its darkest parts over the knot and its extreme limits so softened as to be nearly imperceptible. Now I take the damp leather, and, by folding it and using my thumb, wipe a couple of sections cleanly out of the knot shade. The badger gives a final softening, and, having put in, with the tool, an occasional dark shade where the sap takes any decidedly "knotty" turns, the rail is finished. The two short stiles between the pairs of panels I now shade with a darker wash of a warmer tone, wiping out a light where the grain turns. Across the top rail the tool is now crossed at broadly regular intervals in a very light wash, and then well softened across. The outer long stiles are finished with solid shading, while the wide bottom rail I leave with a dark shading to the lower half, and lighter effect on the top edge, so that the joint of the same with the small stile between the lower panels is emphasized and clearly preserved to the eye.

The plan above described for overgraining, in the ordinary sense, a four-panel door is one that preserves the unity of the structure to the eye. If there is too much cross shading to the panels or rails, the effect is not conducive to repose, while the general darkening of the stiles, especially the outer ones, frames up a door very pleasingly. The strength of the washes used must always be so faint that, when varnished, the two oil and water processes become mellowed into one effect. If the overgraining is sufficiently obtrusive—either by difference of color or depth of shade—to allow it to be clearly picked out by the eye from the combing beneath, it is overdone. There are many other simple and woody treatments for overgraining oak, and these the learner will be best able to acquire by the study of masses of real wood, and especially the finished graining of experienced workers.

Shading, or glazing, oak is a process by which either old or new graining can be altered in tone or color by using *oil color*. As this requires no megilphing, a drying mixture simply needs to be stained according to desired color. Grainers occasionally glaze over portions of their new work, such as the stiles as above treated, with the same graining color, and may also coat the panel moldings with the same. In matching old graining, the oil glazing process may be useful in helping to get the mellowness which, independent of the graining, the ageing of varnish gives to work. Whether used partially, as just indicated, or as a means of converting light-grained oak into medium, or medium into dark oak, this is a practice that any intelligent worker who has mastered the foregoing will easily be able to accomplish. Occasionally the glazing principle is reversed, if I may so term it, in this manner: The panel is rubbed in, figured with lights and half-lights, but not combed; when this is dry, the oil color is again spread thereon, and the imitation of *grain* obtained with combs of gutta-percha, cork or a similar soft material. The grain which crosses the lights is then wiped cleanly away, and the work is finally overgrained and varnished. It is very obvious that this method would be too tedious for all ordinary purposes, but

the zealous student will not fail to practically study a process which is capable of being developed into imitations far more realistic and natural in effect than the usual method will allow.

Whether the workers use gutta-percha, steel or leather combs ; whether he wipes his figure with nail or thumb-piece, or shades in oil or water-color, are really but secondary considerations. Providing the grainer understands and feels what effects he is working to obtain—a knowledge to be derived only from painstaking study of natural samples, which cannot be reiterated too persistently herein—and providing, beyond this, that his study of the nature and qualities of the materials and tools he uses is of an equally thorough description, then unceasing application can and will find its own methods, and success alone will justify them.

CHAPTER IV.

GROUNDING AND GRAINING COLORS FOR ALL VARIETIES OF OAK.

THE justly deserved popularity of oak graining for woodwork in situations which are very much exposed to hard usage and wear, is a fact patent to most of us. A passing glance at the houses in a street of any English town or city will usually discover that nine out of ten of the front doors are so treated; and although we find that amongst the aristocratic quarters of the metropolis and other large centres, very dark shades of bronze green, maroon, "leather," or cinnamon colors are much in vogue, with here and there an entrance door of enameled ivory white, oak graining of some shade and color is still well patronized even in these high places. Notwithstanding the "monetary aspect" is, without doubt, the main reason of this partiality to oak for front doors—since woodwork finished in plain, varnished colors requires double the amount of preparatory work that suffices for work to be grained on—the patrons of the imitative art are sufficiently numerous among the wealthier residents of most towns to foster amongst grainers the study and introduction of distinct varieties of color, instead of the monotonous repetition of ordinary polished oak. To this cause, far more than to any considerations of their suitability for *interior* work, the use of "light oak," "medium," "dark," "antique," and other similarly termed graining effects, is undoubtedly due. In the papers upon oak graining already published in THE WESTERN PAINTER, I have confined my efforts to instructing the learner how to proceed in the imitation of ordinary figured oak of one color only—viz., light, or wainscot, oak. My object in so doing—that the energies and attention of both writer and student might the better be concentrated upon the imitation of grain and figure—being now, I trust, satisfactorily fulfilled, it is here desirable, in order to obtain some measure of completeness, that the learner should extend his knowledge and practical study to those other varieties of figured oak, the demand for, and advantages of, which have been already briefly indicated.

The basis of all oil paints which are prepared as grounding colors for oak graining is, invariably—or should be—ordinary white lead, ground in linseed oil. Although when mixing the ground for a very dark, or antique, oak, the amount of such is, naturally, much less in proportion to that required for light or medium grounds, it is preferable to consider the colored

pigments as purely staining factors—called “stainers”—than as “body” or base pigments. Beyond the main consideration of tint or shade—a question materially affected by the lead—it may be pointed out, with advantage, that none of the ordinary colored pigments furnish the opacity or solidity, nor the desired amount of durability, that white lead is noted for. Whilst in respect to the colors of oak, the grainer who always uses white lead is seldom guilty of those unnaturally bright and garish grounds which are wrong from every point of view. Sufficient white lead for one’s purpose, therefore, with the addition of the very best obtainable driers, having been well broken up in linseed oil, the stainers are added, and well mixed, until the required color is obtained. The paint should then be strained through a piece of old stocking, or such like mesh, and, finally, thinned to working consistency with about two-thirds of linseed oil to one of turpentine; or, if required with less gloss and to be quickly grained upon, the proportions may be reversed.

The pigments used for oak in all its varieties, whether for grounds or graining paints, may be briefly classified as either *opaque or transparent*. Under the first heading are the chromes, Oxford and yellow ochres, and Venetian red; and these should only be used as stainers in making “grounds.” Although the degree of transparency possessed by the colors in the other division varies considerably, not only one from the other, but with different qualities of one pigment, they are sufficiently translucent to give due effect to any colored ground they are superimposed upon. Raw and burnt sienna—or *Terra di Sienna*—raw and burnt Turkey umber and Vandyke brown, are the most useful of this class; whilst for the purposes of glazing and overgraining, ivory and blue blacks, with the Prussian and indigo blue, may be added to the list—the blues being, however, seldom required or advisable.

Chrome, of either the “middle” or “orange” color, may be useful, *to a slight extent*, in staining ground colors when very bright and rich imitations are desired. If used with other more sombre stainers to lower its tone somewhat, and providing the graining color and overgraining are used to still more modify its native brightness, the effect may justify the means; but, generally considered, chrome is neither conducive to good coloring or a natural, woody effect. Although one may sometimes see a door grounded with a bright chrome-yellow tint for light oak, or a decided orange-red color for medium oak, such will certainly not be the work of one who has studied and worked from the real woods, much less of a good grainer.

Yellow ochre, Oxford ochre, Italian ochre, and so forth, are all of one similar nature and color, their main difference being that of quality and price, and the degree of warmth or redness noticeable—the so-termed “Oxford” being the richest. Their proper function in graining is purely that of staining the white lead paint for ground colors. It is no uncommon matter to see an incompetent person prepare graining color with this pigment, a use which it is totally unsuited for, since, being decidedly opaque by nature,

the due effect of the ground it is spread upon is very much marred. If very rich and light oak is required, raw sienna is the yellow pigment which ought to be used, but even this is seldom required as decided yellow and bright tones are not true characteristics of real oak colors. The ordinary commercial yellow ochre is, moreover the only one of this class of pigments we need use, since the addition of a little Venetian red will make any warm tint desired. This latter pigment, a species of *burnt* ochre—whereby the redness is acquired—is the only one commendable for obtaining warmth in grounds, not only for oak, but also for the red imitations of mahogany, etc. Turning to the transparent and semi-transparent pigments, raw and burnt umbers are the two most useful amongst them, and, as such, demand a little more notice in these graining papers than they have heretofore received.

Umber is a natural pigment, consisting of a mixture of clays and brown hematite, originally obtained from Umbra, whence its name. The best is now obtained from Cyprus, and is usually known as *Turkey umber*. Besides the usual washing and grinding, which all such native pigments have to undergo before being fit for commercial use, the umber is subjected to a moderate amount of heat to obtain the tone we know as *raw umber*—an almost neutral brown. When strongly heated, the pigment attains to more warmth and richness, and we then have the *burnt umber* of commerce. This pigment is also largely produced from other artificial sources, the bulk of cheap umbers being of this kind. Besides being valuable on account of their transparency, the umbers are also particularly noted for their good drying qualities in oil, so much so, that under certain circumstances they may be employed as drying factors. For graining purposes in oil color this is a very commendable property, and one which the competent worker will practically bear in mind when using large proportions of the pigments. If the grainer was possessed of only the raw and burnt umbers for staining his oil graining paint, the imitation of varieties of oak color would rather gain than lose in natural color status; for the former is not to be bettered, generally, for very light imitations, whilst burnt umber may be used from light to the darkest of “antique” oaks. They are, further, invaluable for mixing grounds.

Raw and burnt sienna, which were described fully in the preceding papers, are useful for oak colors when a forced richness is required. Similar in nature and preparation to the umbers, they appear rather more transparent than the latter, but lack the natural drying qualities of umber when used in oil. Their chief province in graining is for those imitations of woods which are obtained with pigments ground in water, and for mahogany, maple, walnut, etc., they are almost indispensable.

Vandyke brown is also an earth pigment, which owes both its name and, I believe, its popularity to the celebrated Dutch painter, by whom it was largely used. Our modern Vandyke differs but slightly in nature and preparation from the original pigment. It is a very dark and rich brown, neither

inclining to yellow or red, but yet so rich and deep as to make ivory black look poor against it. Since in its nature it partakes largely of bituminous substances, it is a remarkably *slow drier*, and if used alone in oil will require to be diluted with little else than terebine or a similar drying liquid. "Japan gold size," it may here be mentioned, is not a suitable drier to use with linseed oil paints; terebine is far preferable, although with turpentine mixtures the gold size is an admirable drier. Like the *siennas*, Vandyke brown is mostly used for graining when ground in water. In overgraining oak, it is the principal pigment used, its color, in water, being usually warmer and richer than when used in oil.

The few remaining pigments mentioned with the transparent colors for oak graining are all of the "cold type"—viz., neutral blacks and blues. Of the former, blue black is the most useful for oak and that principally for overgraining in combination with Vandyke. Black is also useful in mixing the dark, "drabby" *grounds* necessary for obtaining very "ancient" oaks. To some of my readers who have worked, perhaps, in a professional way at graining, the use of the transparent blues of Prussian and indigo may seem a questionable, or, to say the least, a curious, innovation. To those whose minds are open to the results of experiments and practical experience, I commend the study of such natural oak color effects as are to be obtained by using occasional touches of "bluish" washes made from the above transparent pigments. It must be remembered that richness of color in woods, as in polychromatic effects, is but a matter of comparison and contrast, and therefore, if, instead of forcing their color values by bright grounds, bright graining color and richer overgraining, some contrasting cool tones are introduced, it is possible to obtain more *natural* color variety and yet retain the native modesty of the real oak contrasts. One of the most successful pieces of interior oak graining that I remember to have come across was such an example, which had been worked upon a ground slightly "cooled" with blue, and with a graining color anything but rich in tone. Again, Prussian and indigo when ground in water are vastly different to the same prepared in oil; whilst the mellowness given by ordinary copal or oak varnish is, generally speaking, very much in excess of that which either shellac or wax polishing will give to real oak. It is by far the better plan to work the first stages of a good piece of oak in sober tones, leaving to the glazing and overgraining to enrich, if necessary, the work, than to start with a false brightness, and, in the final phase, struggle to modify the fault.

The binding of distemper graining pigments may here be touched upon ere concluding this paper with a few definite recipes for oak colors. The principle which underlies the use of a gum with water-color painting, and with which the pigments are fixed to the paper, is the same when the water colors are connected with graining. Beer for the latter purpose is, however, the usually accepted binding medium. Although it was once a recognized imposition for the grainer to represent beer—and that in no very minute

quantity—as absolutely necessary to his work, a more honest and educated knowledge is now current. Vandyke brown requires no binder for overgraining in water, and the siennas but very little, and that in exceptional cases. When using black or the cool tones—either alone or in combination with warmer colors—a little beer is necessary, since black has no binding power of itself. Although if mixed with Vandyke in equal proportions, the latter will bind the black also, it is always best to be sure that the overgraining will not work up when varnishing our work. For black alone, when finishing “antique” oak, the wash must be strong in beer; and for mixed washes, the half beer is a safe proportion. For the student’s future use and reference I now append a short list as a guide in mixing grounds and graining colors of the varieties I have indicated, at the same time commending him to work ultimately more by knowledge and understanding than by recipe.

For very light oak the ground color is made from white lead paint, tinted to a desired cream with yellow ochre. The graining color may be stained with raw sienna and raw umber, or the latter alone; and the work overgrained in water with Vandyke brown and blue black or indigo, used very weak in color.

Ordinary light oak requires a clean buff ground, stained by ochre, and occasionally a touch of Venetian red or umber, according to required warmth or coolness. Raw umber is sufficient for the graining color, or burnt umber, if desired of a richer cast; Vandyke and blue black for overgraining.

Medium oak is best upon a warm buff, the red and ochre therein being slightly toned down with umber. Burnt umber alone makes a splendid graining color, and Vandyke is usually sufficient for shading.

For dark oak the grounds are best made with three pigments—ochre, burnt sienna, and burnt umber. The best grounds for this variety, although showing a decided yellow cast, require more umber than the preceding one. The presence of red should be very apparent in the mixture, but both that and the yellowness should be sobered by umber. The graining color may be burnt umber, or burnt sienna and black, overgrained with black and Vandyke washes, either used separately or as a mixture.

Very dark or antique oak graining has been of late years in comparatively strong demand—a treatment doubtless introduced by the use of so much ammonia-fumigated real oak. A neutral “drabby” ground is most suited for this, both the red and yellow being very subservient to the umber or black tones. The graining color for this may be either Vandyke ground in oil, or ivory black and burnt umber; whilst the overgraining will give very deep and transparent effects if blue black or even ivory black is used. A little Vandyke toning—here and there—will improve the work in its entirety. Vandyke alone for the overgraining will make it very rich, but transparent black tones are more characteristic of the real “antique” color.

Mechanical and patent aids and imitations will be considered in a special chapter.

CHAPTER V.

GRAINING OAK IN SPIRIT COLOR AND WATER COLOR.

THE methods of imitating figured oak which I now purpose describing, although neither so durable nor popular as the oil-graining process, are well worth the attention of the practical grainer and the aspirants thereto amongst my readers. The nature of oil-graining color we know to be similar to ordinary oil paint—so far as the *drying* or oxidization goes. In both mixtures the oil hardens into a film or “skin,” of a horny nature, and this action, however it may be properly accelerated by drying agents, should never be forced to completion in a less period than eight hours of fair weather. If oil color is made to dry in much less than this time, the work must suffer in respect to durability; whilst in manipulating the color the grainer is unduly handicapped. The interval of a proper period of time, for external work especially, between the various coatings of white lead paint, the graining, overgraining and final varnishing of oil-grained oak, is a matter of much importance, and although the writer would scarcely advise fixed and arbitrary times between each coating or process—as advocated by some experienced grainers—it is very necessary that the worker should thoroughly realize the difference between paint which is only *surface* dry and that which is *hard* “*right through*.” With these considerations in one's mind, it follows that painting and re-graining woodwork in oil should be a work extending over seven to fourteen days. This length of time for a single door would often make it a prohibitive work; and, as in some cases, if a master had to send his man a long journey, the time occupied by going and coming so many times would be greater than that required for the work. It is customary in most places for a plain painter to prepare and *ground* the door for graining; and if the usual two preceding coats are sufficient, then it is possible, by graining the door in one of the methods under notice, for the worker to both grain and varnish upon the same day, and that without any detriment to the job, or so much dependence upon the atmosphere.

The advantages of graining oak in spirit color go further than this time-saving point of convenience, however, for another distinctive feature of such a quick drying imitation is the small risk of it getting “*smudged*” or rubbed off by the passer-by. In the densely-packed thoroughfares of Newgate street, Cheapside, and similar central spots of London and the other large

cities, the friendly warning of the white chalk markings would be very quickly obliterated from the pavement ; whilst the "push and scramble" method of pedestrianism that the busy man must adopt, makes it impossible to trouble about such minor affairs as rubbing the grainers' work.

The nature and preparation of spirit graining color are best explained together. The chief feature of the mixture is the, necessarily, entire absence therefrom of linseed oil in its native condition, and, generally, in any form. The term "*spirit color*"—a misnomer—is derived from the fact that the volatile oil of *turpentine* is the chief fluid, or solvent, used in the mixture. Turpentine alone, although containing a small proportion of resin, is not in itself a binding or fixing agent, so that this latter property must be added in the form of varnish. In mixing spirit graining color, all ordinary conditions of manipulation are sacrificed to the chief object of obtaining a very quick drying process. The best varnish to use is, therefore, a so-called *spirit varnish*: viz., one in which turpentine is the solvent. There are several kinds of varnishes made on this basis suitable for the purpose ; the most reliable is that known as white hard *Bath varnish*. It is very necessary here to point out the entirely different natures of the above and the ordinary "white hard" shellac varnish ; the latter, having alcohol as the solvent, is utterly unsuited for the purpose under notice. The proportion of spirit varnish to turpentine is more a matter of each circumstance than of rule ; but a maximum of *one* of varnish to *three* of "turps" may be taken as a basis of computation. Although we must still, theoretically look upon the graining color as a *stain*—viz., a translucent fluid—it is necessary to add a little body to the liquid, as well as the pigments or "stainers." This is best obtained with the aid of a little whiting. "*Gilder's*" whiting implies the best and finest washed quality, and this should be used when possible. If free from moisture, it will be readily amenable to the palette-knife, and should be well rubbed up into a paste by the aid of turpentine. This whiting paste is now stained to the proper color by the aid of such grainers' pigments as raw or burnt sienna, raw or burnt Turkey umber, and ivory black—the latter ground in "turps," and the others "in oil." Lest the proportion of whiting should trouble the worker, I may point out the similarity between the required quantity of this and the amount of patent paste driers that one would use—but for a different purpose—in compounding oil graining color : a few ounces to the pound, or pint, in both cases. Whiting and pigment being mixed together, and the required color obtained, the varnish should be then introduced, and well incorporated with the former in the pot, and the turps finally added and well stirred. Before starting the work, it is well to test the color for *binding* qualities. Should the fluid, when dry, not bear *fair* rubbing, a little more varnish is required ; whilst if it has any decided gloss when dry, it will stand diluting with more turps, and will also spread more satisfactorily therefrom. Experience and practice will, after one or two essays, give the

grainer all confidence in his proportions and mixing, providing pure turpentine and a varnish of the same strength and nature are always used.

Although the above varnishes are the best and most reliable for durability and quickness of drying, copal oil varnish or japan gold size may be substituted for the copal spirit varnish as the drying or binding factor. The ordinary "church oak" varnish would work up a mixture to dry in about four hours, and the gold size would be as quick as any varnish. The latter, however, would not be of so durable a nature, nor would the "church oak" be as quick as the Bath varnish; but if this cannot be conveniently obtained, equal quantities of "japanners" and church oak will make a good substitute for spirit varnish. Having, in the preceding paper, exhaustively treated "grounds," graining colors and pigments for oak, the student will readily apply its contents to this process of *spirit graining*. As a matter of very great convenience and economy, I would commend the use of the finest umbers, etc., which are put up in pound collapsible tubes by all the best color manufacturers. Although about double the price of the ordinary "keg" pigments, which are sold at "per cwt." rates, they are cheaper to the grainer in the long run. For instance, if a grainer had a three-mile walk to reach his one or two doors which he wishes to grain and varnish "right off," his material need only be a little mixed turps and varnish in a can, a small knob of gilders' whiting, his door varnish, and a tube of burnt umber and raw sienna. With these he could grain either light or dark oak, would have good, rich colors, and would not want to strain grit and "skins" away before using. Should the worker be compelled to use the common, imperfectly washed whiting, it is best to dry it well, and the color must be strained through fine muslin before being used.

To grain a door in spirit color no special experience or knowledge is required other than the ability to grain oak in oil, and an intelligent application of the same *principles* to the different natures of the two mixtures. In practice we must treat spirit graining in the same manner as when overgraining in water color, working it in separate portions. In graining a door, it is necessary to rub in one panel at a time, using a wide brush to quickly and evenly spread the color, and then putting a slight grain in by drawing a dusting brush down it. A further grain is at once given by using fine and medium steel combs, and the panel is then allowed to set. When all are so treated, the mouldings are worked. Although when "rubbing in" the panels, the surrounding mouldings may have been brushed with the color, it will be found that under the influence of the turps solvent, the parts so touched will soon "rub up" again, and allow us to give an even coating to the whole of them. Whatever the nature of the mouldings, it is best to finish them with a dry brush, streaking or stippling them in a "woody" manner, and making them slightly darker and contrasting to the remainder of the door. In the same way as a door is painted we now proceed with the cross rails and then the stiles, and, as I have pointed out when overgraining

oak, the distemper mixture is a most useful process to the student; the and clean. For the process now described, a piece of rag dipped into turps and a fine bevel edge lath or a strip of zinc will enable us to wipe the intersections cleanly. Working and combing each division at a time, we are thus able to get almost as much variety and cleanliness as in graining with oil color.

By the time the framing of a door is rubbed in and combed, the door itself will be dry and ready for veining. It is now that different methods are necessary, for instead of wiping out the graining color with rag and thumb piece, as in the oil process, we use a veining fitch (see Fig. 12, Chapter I., of this series), and put in the "lights" with a solvent strong enough to dissolve the spirit graining color wherever we paint it on. In using spirit color made from spirit varnish and turps, and providing sufficient only of the former is used to bind it, then a solution of common soda is the best and cleanest solvent. This fluid having been prepared the desired strength, a little water-pigment is added to stain it sufficiently for the grainer to follow the brush markings as they are put in. Upon referring to the illustration of veining fitch, it will be seen that the hair is arranged in one tuft of long bristles, broad, but with a thin edge. This is manipulated to get the same broad and narrow effects as are obtained with the "thumb piece" of similar shape. Practice with the veining fitch will, of course, be very necessary before the grainer can use it quickly and naturally. These brushes, which are made in various sizes, are held with the fingers and thumb—like a stick of willow charcoal in sketching large forms. Lightness and delicacy of action are very necessary to put sufficient only of the solvent for our purpose without any superfluity to run down and spoil the panel. When the soda has done its work, the door must be well washed down with cold water and dried with a wash-leather.

In using graining color of a stronger nature, it may be found advisable to use turpentine as the solvent instead of soda water. When this is the case, the grainer uses a wide pad of soft flannel, and draws off the turps after making a few veins. The effect of the wiping is somewhat softer than the soda process, and, as it is also more convenient, we find it used to a greater extent on the city warehouses than the soda. Turpentine, when so used, requires to be stained in the same way as the soda water; or the veining may be executed by diluting the spirit color with more turpentine.

All such work of the average quality must now be overgrained, and this process I have already explained. Should there be any difficulty—as is often the case when overgraining—in getting the water color to spread properly on our grained work, the simplest way is to sponge it over with beer and water in equal proportions, or to rub it over with a little powdered whiting on a rag. The shading, dapple, etc., can then be put in, and in a short time the grainer will find his work ready for the finishing process of varnishing.

Graining oak in distemper, or water color, is a process so little in demand nowadays that a brief outline only of the work appears necessary. Since it is but a little, if at all, quicker than the spirit graining, and as it lacks other practical advantages common to the preceding process, there are but a few points upon which to commend it. The raw and burnt umbers are the chief pigments used, and these must be purchased of a superior quality to the common umbers sold in powder form. The pigment being rubbed up in dilute beer, and the desired color obtained, the mixture is then brushed over a panel. A small piece of damp sponge is now used to wipe off some portions of the color and give variety of perpendicular shade. A dusting-brush or badger is next drawn down the panel, and a fine grain thus obtained; india rubber combs may be used for the grain also. For veining, a damp wash-leather is placed over the "thumb piece" and the "lights" and half tones are quickly wiped out and softened slightly with the badger. If the graining color is used very strong in beer, the work, when perfectly dry, will allow us to put an overgrain upon the first color. When such is desired, a thin oak overgrainer can be dipped into a weaker solution of graining color and drawn over the work, as in overgraining oak in oil. It must be borne in mind, however, that if the first color is rubbed to any extent, the grain and figures will be "smudged." Should it be desired to make a sure job of the overgraining, it is advisable to paint over the first water grain with a thin coat of japan gold size and turps in equal proportions; this will dry within one hour, and the work can then be overgrained and shaded in water in safety. In using distemper graining on doors, etc., the same conditions of working in portions apply as to the spirit graining. For acquiring facility and confidence in wiping out the lights of the same portions, the joints between rail and stile must be worked sharp panel can be rubbed over and grained *ad lib.*, and the absence of smell and substitution of the damp wash-leather for linen rag are both appreciable conveniences to home practice.

Overgraining or "oak graining" metal rollers are particularly valuable for finishing in good style the spirit-grained work; in such cases the roller grain is executed with water color, and after the panels are shaded with the brush.

Distemper graining is also used very considerably in finishing cheap furniture. As this is somewhat a distinct line from house graining, and also a subject likely to prove usefully interesting to many readers, I hope, further on, to devote a short paper to this branch.

CHAPTER VI.

GRAINING POLLARD OAK AND KNOTTED OAK.

THE subject of my present paper marks a distinct step forward in the path of progress for the student of graining, since we shall now take in hand the imitation of a beautiful variety of oak wood, and which is obtained by the *distemper*, or "water-graining" process. So far, these lessons have dealt with the latter merely as an *accessory* to oil color graining—as in the "over-graining" of oak. The graining of the "Pollard" variety, however, opens up a new sphere of study and practice for the learner, which will prove even more interesting than the work appertaining to imitations of the ordinary, or "maiden" oak. It is a fact fully recognized by all "imitators" of experience that facility in wiping out the "lights" of oak is acquired by some workers far more rapidly than others; whilst, on the other hand, we repeatedly find the grainers who "shine" in oil imitations often outstripped in speed and beauty of results—when it comes to distemper graining—by the same slow workers who were previously outshone. Such, certainly, has been the results of the writer's observation and experience; my purpose, however, is not merely to notice the fact herein, but to prepare the student who puts these papers to a practical use for an entirely different method of working, in which, according to his individual faculties, his previous rate of progress may be somewhat reversed. No learner must take upon himself, from these few general remarks, to deduce an excuse for neglecting the painstaking study of and practice from real specimens of *veined* oak; for proficiency in any branch can only be acquired through the medium of correct knowledge and continuous practice.

Pollard Oak is a variety that may here with advantage be briefly considered, both with respect to its nature and appearance, and the cause of its beauty and markings. The meaning of the word "pollard" is easily discovered by reference to a simple dictionary, and, although at first glance the connection between "poll"—the head—and "pollard"—a tree lopped—with "the art of graining" may appear rather remote, their meaning gives the key-note of the explanation. Pollard, or rather "pollarded," oak belongs to the same natural class of oak as the ordinary figured variety, the striking appearance of which, however, is brought about by combined artificial and natural means. In most parts of the country there is a sufficiency of fuel without cutting or lopping off the branches of the trees; but when by

accident or design, an oak tree is so treated during its growth, then the trunk will display the results of this "pollarding." We are unable here to examine into the botanical cause and effect of such matters, but it must be understood that the junction of a branch with the parent trunk of the oak tree is characterized by a growth of knots and irregular, twisted grain. When, therefore, these "arms" are lopped off, the knots and roots of the branch still remain connected with the heart of the tree ; so that, provided the pollarding be executed at intervals of a few years, as the tree grows, the parent stem, when cut into long planks, will eventually display these clusters of knots, this gnarled and twisted grain, with intervening spaces of plainer grain, and which condition we know as pollard oak.

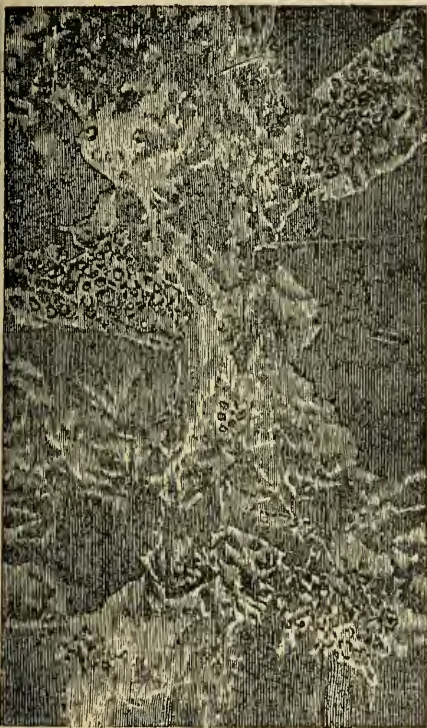


FIG. 1.—POLLARD OAK; FIRST STAGE.

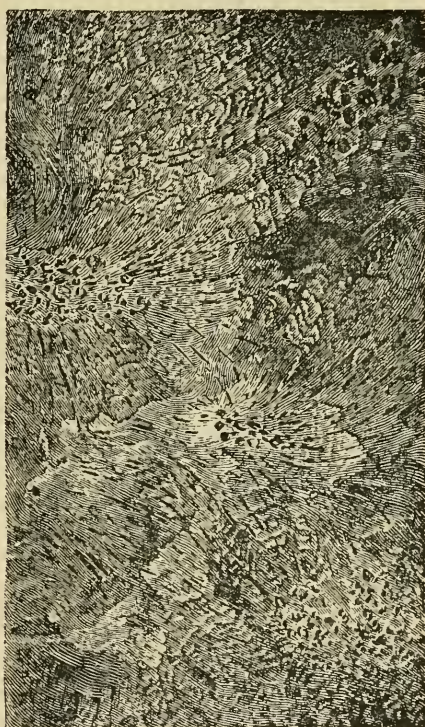


FIG. 2.—POLLARD OAK; SECOND STAGE.

The brushes required for this imitation are a large thick, mottler (Chapter I.) ; a large sash tool, such as that advised for overgraining ordinary oak ; the indispensable badger, a piece of old open sponge, a wash leather, a couple of round fitches, medium and small sizes, and, later on, the sable pencil and overgrainer, depicted as Figs. 21 and 8, respectively, in Chapter I.

The ground color for pollard oak should be a warm buff, very similar to the ground advised in the chapter on oak grounds for medium oak, but slightly richer. This is best made from white lead, Oxford ochre, a little Venetian red, and, when the imitation is required to be of a "quiet" nature,

a little burnt umber will improve the color. Occasionally we may come across directions and instructions upon this subject, which advise the ground to be made from chrome, vermilion and white lead. The brightness of such a combination would spoil the natural effect of any graining, however "woody" the figure may be.

The importance of working and studying from natural specimens I have repeatedly drawn attention to; and the young grainer will find a piece of real pollard oak one of the best investments he can make. A good specimen of this wood is somewhat difficult to obtain, and I, therefore, for the time being, will aim to make the student acquainted with the appearance and method of imitating the figure—until he is able to secure the coveted sample—by the poor but useful substitutes of pen and pencil. With respect to the grounding colors and the above directions for mixing, I may state that most grainers err on the side of brightness. The appearance of two real specimens I have in front of my table as I write may be given in support of this. Piece No. I. has been French polished, and kept under fair conditions in my possession for many years; its color is decidedly warm, and very rich; but even this could not be well copied without a slight dash of umber in the ground. The other sample has been merely well oiled, and in no way artificially colored. To match this latter piece the ground would have to be that for an ordinary medium oak: viz., a slightly warm buff; the idea of graining it upon a vermilion and chrome tinted ground would be an absurd one.

In imitating pollard oak, there are two commendable but slightly different treatments, the working of which I will now explain. The first of these aims at reproducing the general effect of the wood in a broad and natural manner, and upon the ordinary buff oak ground, with complete results akin to the real uncolored wood. The other style of imitation is worked on more, if I may so term it, conventional lines; the ground is made for a warm and very rich final tone, such as the real thing would acquire from colored polishing and age; whilst the plain and knotty features of the grain are more distinctly separated, and the detail of which is more minutely and painstakingly rendered. Both of these treatments are worth studying. That first mentioned is mostly practiced in the West of England, but in the northern counties the more conventional "pollard" is chiefly favored and practiced.

The illustrations of graining pollard oak accompanying this description refer to the broad, and, to coin a term, "naturalistic" imitation; and as this is the most simple for the student to follow, we will give our first attention thereto. Having the tools before mentioned conveniently to hand, and also a little beer, some water, and a little each of Vandyke brown, blue-black, and burnt sienna (all finely ground in water), we dilute the former with beer to a fluid form, in old plates or basins, and the sienna to a thin wash in a third vessel. With the large sash tool, the panel is rubbed over with the sienna wash, and then taking up a damp wash leather, we dab and roll

it over portions of the surface, which gives it an irregular but connected mottle. (Fig. 1.) This mottle is at once badgered and "softened" into stronger but softer masses. With a stiff round fitch dipped into the Vandyke and black, we at once put in the clusters of knots of innumerable sizes and shapes, but giving them an open appearance, and not as if put on with the finger tips. This part must now stand for a few minutes until dry, when we pass the mottler dipped in clean, cold water, over the work, and with the pencil overgrainer (Fig. 8, Chapter I.), charged with a wash of Vandyke, put in the fine grain which crosses more or less regularly the plain spaces between the knots. As we do each few lines of grain we soften each indi-



FIG. 3.—POLLARD; FINAL STAGE.

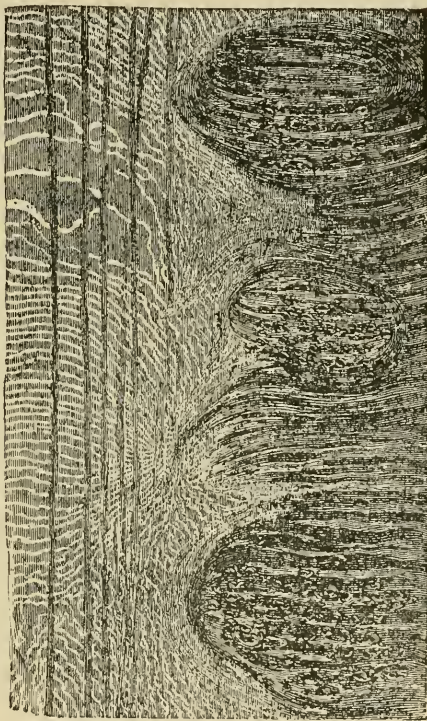


FIG. 4.—KNOTTED OAK IN OIL.

vidual one to a dark edge by the aid of the badger; when all are so treated, we take our sable pencil, and with a little black, we paint in the numberless fine dark veins which cross in an opposite direction the fainter cross grain, and which work from one set of knots to another set. (Fig. 2.) The work must now be varnished once, or if time and cost must be considered, we give it a coat of japan gold size and turps in equal parts. It is then ready for the final glazing or overshadowing, which is also done in beer.

The final glazing of the pollard oak imitation I am now describing is a similar process to the first mottling, shown in Fig. 1, but instead of using burnt sienna, we employ a wash of fine blue-black. With the latter pigment

we must use a fluid strong in beer, as black is a very bad binder, and this is one of those exceptions in which the grainer—however strong may be his abhorrence to it as a beverage—will find beer to be necessary. If Vandyke brown is mixed with black, the strong binding powers of the former are sufficient for the two; but as nothing is more annoying or disastrous than to find our glazing color working up with the final varnishing, even in the latter case it is best to use weak beer. Having, therefore, brushed over our panel with the blue-black wash, we take the wash-leather, and after wiping out a few sharp and small reflective lights amongst the knots, we roll the leather over the panel in such manner as to get more depth and transparency to the whole previous work. (Fig. 3.) If these methods have been carefully followed, the panel will give a rich and natural woody effect, and will make an admirable foil to the maiden oak stiles when used on doors. Where possible, all water-grained imitations should be worked upon the best and finest "brush work," and after having one finishing coat of copal varnish, it should stand a few days to harden. It will then be fit for "flatting" or felting down with finest pulverized pumice-stone rubbed with felt and water, and finally a good flowing coat of copal (painters' "carriage" or "copal oak") will give a finish, fit to last, with occasional re varnishing, for twenty years.

Another imitation of pollard oak, which I have previously alluded to, is obtained with slightly different means, but on the same principle as that already described. The ground being of a richer and warmer cast, we commence with a full wash of burnt sienna; then with the sponge dipped into the Vandyke, and also slightly into the blue-black, we dab in the dark masses of knots, and put in a few connecting touches of dark color where it appears desirable. With the large mottler we now work the color surrounding the knots into one sweeping direction, using the brush at right angles to the board, and thus get one natural lead across the plain spaces from one "nest" to another. With the round, stiff fitch we further work the grain surrounding and amongst the individual knots in the same natural, flowing curves as the mottler has indicated, and also "open" any knots which may appear too "spotty" or "set." The plainer spaces may also be mottled after the appearance of Fig. 1 in the previous process, but scarcely to an equal extent. The work can now all dry, and should then be wetted over, which our beer allows us to do without moving the colors, and then overgrained. Instead of the pencil overgrainer before used, we take the thin overgrainer (Fig. 13, Chapter I.), and, separating it into fine divisions, we work in the overgrain with a thin wash of Vandyke. While still wet, as before directed, the grain is softened to a dark edge, and then the fine dark markings which cross the latter are put in with the pencil and blue-black. The varnishing or "binding down" coating is now given, and then the work is glazed with Vandyke, if desired full and rich in complete effect, or with the blue-black or a mixture, if we wish to tone down the warmth.

Providing we use beer with our pigments, we can, with care, always wet our work over, and thus see the color when varnished. In the first process of such imitations we are therefore able to make little alterations or additions by re-wetting the work which may have dried too quickly for us.

In offering these directions to the learner of graining, the writer's chief desire is to make the *modus operandi* and the reason thereof plain and apparent to those readers of THE WESTERN PAINTER who have no better way open to them for obtaining instructions upon imitating woods. The few black and white illustrations which we have attempted in these papers are in no way given as examples or copies, but solely as pictorial aids to the letterpress. The advice given in my opening paper of procuring either good natural samples of woods, or imitations grained by a good professional worker, must be applied to all these varieties; and when the student has obtained all the assistance he is able to gather from this present aid, his best plan would be to take practical lessons, directly or by intelligent observation, from those experienced workers whose imitations are their best recommendations. As in all arts and crafts, practice will and must beget experience and knowledge, and the young grainer will often produce more masterly effects after a few lessons by actually watching the manipulation of tools and pigments by a proficient man than he would from a long study of real specimens alone, without instructions.

Pollard oak in oil may be grained in a similar manner as in water. The pigments, previously ground in oil, should have a little of the best terebine rubbed up with them, and the bright graining color, or first wash, should be made as the ordinary oil-graining mixtures are. The sponge, mottler and stiff fitches are used as in water color, and, to take the place of water, and keep our work moist and amenable to mottler and fitch, we substitute turpentine. The brushes are dipped into clean turps, and then the superfluity pressed out before using them on our panel. The final glazing is worked as in the distemper process; but we have no occasion here to varnish or bind down the earlier process, in consequence of it being oil-grained.

Root of oak is an imitation much akin to the pollard I first described. The grain of the wood, however, instead of "flowing" from each set of knots, more in the one direction of the length of plank, is found to encircle the masses of knots in irregular rings of overgrain, and is marked by the more decided presence of the dark pencil veins. It may be of interest to notice that one contemporary, an experienced writer and grainer, classes *all* such specimens, with which my first method is identified, as necessarily all "root of oak," and not genuine pollard. My own real specimen, upon which natural appearance the process and imitation is based, was cut directly off a fourteen-foot plank, and, therefore, could not possibly be genuine *root*. It is very easy to understand how, when a specimen is cut from a large oak, that an old junction with a branch may be displayed of so large a size as to give it the appearance of a piece of root cut across the stump of the tree.

With respect to this same specimen, it will scarcely be credited that, for want of a purchaser, or, perhaps, through ignorance of its value, the plank in question was being used by a country carpenter for making common coffins. Surely the want of trade and technical education was never better exemplified.

Knotted oak—so called—is a useful and effective imitation of combined knotted and figured portions of the wood. It is commonly used, when graining oak in oil, for the panels, with ordinary oak stiles. It is a cheap attempt at the richness and variety of root of oak grained in oil, and although it is often as “nasty” as cheap, there are many grainers who make a good door with the panels so varied. I append a brief description of the working and a black and white “suggestion” of its appearance. (Fig. 4.)

The color for knotted oak is a warm, rich buff ground with a dash of umber therein, and the graining-color the best burnt Turkey umber. A little of the pigment having been made to ordinary working consistency, the panel is rubbed in evenly, and then one side slightly combed. With a stiff, round fitch we now take up a little pure umber, only slightly thinned with terebine, and put in the dark knots; then, with another larger fitch, work round these, and give them and the surrounding space a growing motion towards the other half of the panel. We now put in the fine, neat lights across the slightly combed half, and with a lead towards the knots; and then with a pencil and rag we work up—adding to or taking from—the knotted half according to the circumstances, “time and cost,” of the job. When dry, we overgrain in distemper with a wash of Vandyke. The combined treatment of figure and knots gives full scope for display in the last process, and a creditable and natural effect may thus be obtained without much more cost than of a panel of *maiden oak*.

CHAPTER VII.

USEFUL METHODS OF GRAINING AND FINISHING CHEAP FURNITURE.

WITH a view to avoid any feeling of dry monotony which the continuance of a set of papers of a purely instructive and theoretical nature might result in to the general reader of *THE WESTERN PAINTER*, I purpose to vary these lessons by occasional chapters dealing not so much with the art and technical aspect of graining as with the practical and every-day purposes to which the instructions can be applied. In due course, a consideration of the *decorative* application of these imitations may furnish herein some matter of interest and, I hope, guidance to operative painters and grainers especially. For the present, however, we will content ourselves with putting into practice some of the knowledge and skill which the student should have now acquired from this series.

The furniture of the home, be it ever so common and plain, is a topic that every reader can be interested in. Notwithstanding it may be remarked with perfect truth that the learner who, from a preceding lesson, can grain a door will surely be able to grain a wardrobe, there is much information that can with advantage be tendered such a one upon the above imperative conditions of method and cost, and which, to the wage-earning worker, would make all the difference between profit and loss in graining cheaply-made furniture.

In graining bedroom furniture—the bulk of cheap suites of which are so finished—we may here consider in the first place what is the most suitable color and aspect to give them. The most favored appearance for all things connected with the sleeping apartment is at the present time that of lightness and “sweet cleanliness,” if I may so term it. This is as it should be, for however much there may be to admire in the “good old times,” the disappearance of its massive and cumbersome bedsteads and chests of drawers, with the arrangements of dust-harboring hangings and valances of fifty years ago, can scarcely be grieved over—that is, from the sanitary and progressive point of view. How far this is a change for the better or for worse, in that a suite of bedroom furniture can now be purchased for about the price of a single article of the past generation, is a question of political economy that does not here concern us. We will take these things as we find them, and assuming that you, my individual reader, have purchased such a bedroom set “in the white”—viz., the common plain deal or pine—I will

endeavor to help you in making them appear a credit to your little homestead and the admiration of your better half.

Under this category of lightness and cheerfulness, we have, therefore, the imitations of light maiden oak, maple, satinwood, pitch pine, birch, etc. The first-mentioned light oak is, without doubt, the most popular of the list, and as imitations of oak have been thoroughly explored herein, we will apply ourselves to the "getting up" of the furniture.

The preparation of furniture for graining upon may be considered from the various aspects of cost, durability and excellence of finish. These we will return to farther on. Our present purpose shall be to make a good, permanent job without stinting our time or the cost of a little material. Ready-made furniture which is essentially cheap can scarcely be finely finished in the wood, so we commence by sandpapering the work down, where required, with No. 1½; then, after dusting it well over, we coat the knots with "patent knotting" and stand aside to dry whilst we prepare our first or priming coat. This is best made with white lead—say 4 lbs.; patent driers, ¼ lb.; red lead, ¼ lb. Beat up in linseed oil and turpentine, in parts three to one respectively, until our paint is of thin working consistency. This makes a hard-drying paint of an oily nature to stop the suction of the new wood. Our second coat is made with white lead and driers of similar proportions and a little more turps. This is, however, first tinted a decided light buff with ochre in oil, and strained before being used; and our furniture must also be again papered down and all holes puttied up before the second coating is spread. It is advisable to make our second coating a little darker than the desired tint of ground for graining upon. After standing a day and without further sandpapering, we may spread the third and grounding coat. This should be made as before, but with equal parts of oil and turps to give a hard and fairly glossy surface for the combing and figuring. The furniture is now ready for oil-graining, over-graining and varnishing. The color being made with raw umber in oil, according to earlier lessons, each article of furniture is barely rubbed in and then combed. In working the usual "turned" table legs, it is best to stipple them with a dry duster or tool, and comb only the plainest portions of such surfaces. Care must be taken to maintain the proper direction of the grain, and, as when working a door, the panels and drawer-fronts only should be figured, and the surrounding portions finished with varieties of plain combing. When dry, we may overgrain the figure and further improve the plain parts with a shading of different natural depths and stronger contrasts, according to personal fancy. The top of the wash stand is better finished with an easy imitation of marble, called usually black and white. Instead of, therefore, painting this portion twice with buff, we use white paint; and after the graining is finished we again coat it carefully with quick-drying white paint, and, with a black crayon or fine pencil and black, put in the veins and then blend them slightly whilst the white is wet. The furniture should finally have

one or two coats of hard-drying or church oak varnish, as ordinary oak or copal may not, and does not usually, harden sufficiently for much handling. The marbled top should be varnished with two or three coats of "white hard" *Bath varnish*, and the articles will then last, with ordinary care, a lifetime. The wash stand, which usually gets the most wear, will need a periodical touching up and re-varnishing; and, especially with regard to the top, be it remembered that an occasional coat or two of varnish will save the trouble of re-painting many times over.

The *graining of furniture in maple, satinwood, pitch pine, etc.*, will appear to most advantage when used on better made woodwork than that of the ordinary factory articles. They should be prepared and "brought on" in white lead paint, if a good job is desired, in the same manner as I have described for oak, and the lessons in my succeeding papers upon imitating these woods will form a useful sequence to this *resume*. Most of these woods are usually grained in distemper, and to get an effective display, larger spaces and portions are necessary; whereas with oak, no matter how small the work, the figure can be pleasingly adapted thereto. Some of the prettiest bedroom suites I remember seeing were at a city house, ten or more years ago. They were made—or veneered, I suppose—in maple and satinwood and were partly polished before being turned over to an artist. This art-worker embellished the articles with ornament in semi-natural colors of the Adams type of design but with all the charm and elegance of Louis XIV. decorative work. The predominant tone of the painted ornament was blue, and this served to heighten, by contrast, the richness of the golden-colored woods. This work was finally polished, over painting as well.

American walnut and pitch pine are two varieties of wood that have become very popular for bedroom furniture during the last few years. Some effective suites of these two woods combined have recently attracted some notice. The panels were walnut, with inlay of lighter wood, and the framing portions were of the pitch pine. Any reader who has the skill and with it a well made suite of such goods, is recommended to try this imitation. Maple combined with American walnut I have also used to decided advantage and satisfaction, but in such a case, with light panels and walnut framework. Such ornate treatments of bedroom furniture would, of course, be entirely misapplied to the common goods first alluded to; but in the face of a present and growing tendency to make the bedroom a pleasant private sanctum as well as the sleeping room, their appearance is one sure to meet with much favor.

The imitation of mahogany, rosewood and other hard and costly woods is very seldom required or advisable with bedroom furniture. The comparative cheapness of real American walnut has been the main reason for its use in sleeping apartments and chiefly accounts for its increasing popularity, notwithstanding the current rage for light painted and enameled work. What is acceptable in the real polished wood respecting the walnut is

scarcely so of its imitations, for one reason especially; dark-grained woods are very prone to show white wherever they get a knock, and the ordinary copal varnish never appears to so much advantage upon dark woods as upon light ones—loss of gloss and bloom is much more readily apparent upon the former surfaces. Where there is much wear and tear, light wood imitations are, therefore, undoubtedly the best for bedroom furniture. It is possible, nevertheless, to avoid the disadvantage of dark woods showing when knocked or rubbed, by graining the imitation directly upon the natural wood's colors. This is a treatment capable of giving most excellent and woody effects, combined with extreme durability, when the time and cost is no great object. To this process I will return in a future paper.

The *cheapest modes of preparing and graining furniture* will prove a matter of some further useful instruction herein, and will enable the poorer worker to get the best show and wear at the smallest cost and will also explain how such articles are grained "wholesale" for the large and cheap makers.

A distemper grounding paint is made with well washed whiting and strong patent or best glue size, and this is substituted for the previous coats of white lead paint. Common and the cheapest whiting will suffice, but if such is at all gritty, we must strain it through a hair sieve. A few pounds of whiting are broken up into sufficient only of water to slacken it. The stainer is now added in the form of cheap powdered pigments—ochre, umber and Venetian red—according to desired ground color. These stainers can be purchased at about 3 cents per pound; and, as the whiting is usually retailed at not more than 1 cent per pound, the most expensive ingredient is, therefore, the glue or patent size. The latter being the most convenient, we take about the same quantity as we have whiting, and having melted it with a very little water, over a fire, we stir it into the whiting. The worker must here remember that the distemper ground will dry much lighter, but that the ordinary hard-drying varnish will also restore much yellowness of color.

Usually, without knotting or sandpapering, the goods are simply dusted and given a good coating of the hot distemper paint. When thoroughly dry, a second coat is spread, and this gives a solid and hard ground for the graining color. If the distemper is free from grit and has been well spread, it is not necessary or advisable to sandpaper the cheapest goods. For graining we take a little fine umber ground in beer—or such pigments as we know will best suit our imitation—and dilute it to working consistency with weak beer. With a large sash tool we rub over the different portions, and by streaking it with a dusting brush and then using gutta percha or india-rubber combs, we get the varieties of grain. Now with a piece of wash-leather instead of rag we quickly wipe out the lights, or figure, before the graining color dries, and finish each panel or division right off. The roughest goods are then coated with the cheapest resin varnish. In order to obtain a supe-

rior finish to this quick process, the articles may be given a thin coat of japan gold size and turps in equal portions. The overgraining by the usual distemper process is then done, and a final good coat of varnish will make a fair and durable finish to a cheap imitation.

When graining dark woods after this method, one coat of the distemper ground will suffice to cover up the wood, but it is a good plan to give a second coat of strong, clear size only, which will enable us to work either oil graining color or water color upon it with much more facility and effect.

In graining with oil color upon these distemper grounds, it need scarcely be pointed out that there is no necessity to "bind down" before over graining, as is required upon water graining. The strong size used with the ground or in the after sizing effectually prevents the varnish from blackening and discoloring the whiting contained therein. For a good class of grained furniture we may get the surface up in strong size and whiting, then well sandpaper it down, coat with clear size and give one coat of white lead paint. For maple this is by far the best plan, and much of the cheap, plain-painted and enameled furniture is also so treated.

Patent knotting composition or varnish is sometimes used as a first coating, then a coat of size will effectually stop the suction of new wood. The "knotting," as it is usually termed, will alone make a good and rich stain for deal wood and one which can be either polished or varnished upon almost immediately.

Lest there be any doubt in the mind of the worker as to the durability of imitations grained upon size color, I may add that for the usual wear of bedroom furniture, such work will last any reasonable length of time. To summarize the pros and cons of the two preparatory methods, oil paint vs. distemper, we have the greater durability accompanied with extra cost of time and material and the objectionable smell of the former, as against the cheapness and quickness, with less wear, of the latter, while the absence of the smell of paint compensates for the dustier and dirtier manipulation of size and whiting colors.

CHAPTER VIII.

GRAINING MAPLE AND PITCH PINE.

N the preceding paper upon graining furniture, the imitation of maple and pitch pine woods were particularly suggested as suitable for that purpose; and since both of these woods are also very popular for graining on woodwork of dwelling-houses, we shall now consider the best methods of imitating them.

The botanical aspect of this subject, the genus, tribe and order to which the various woods imitated belong, is a matter I have intentionally avoided dwelling upon in these papers, not from any disparaging notion of the usefulness of this beautiful branch of science, but with a view to keeping within the simple limits of the practical imitative work, and of best occupying my space to the learner's advantage. The maple tree, however, is far from being so familiar to most of us as the oak, hence it will be as well to indicate a few particulars of this wood.

The Varieties of Maple number considerably over fifty, and these are distributed throughout the temperate regions of both the eastern and western hemispheres. The only species which is a native of our own country (England) is the common maple; this grows only as a small tree, and to some considerable extent as a hedge shrub. The sycamore maple, or great maple, is, however, naturalized in Britain, and grows to much larger and more massive dimensions. This latter species, commonly termed the sycamore, is extensively used by turners and musical instrument makers, and is probably familiar to many readers in the form of a violin back or such like. Notwithstanding the foliage and flower of all varieties of maple are of a highly ornamental nature, and such as will provide the decorator with an admirable *motif* for decorative purposes, the sugar maple from the North American continent ranks far before those above mentioned for beauty of grain and serviceability for our modern civilized requirements. As its name implies, this species of maple is useful in a two-fold manner—as a source of obtaining sugar, and particularly, under the designation of “bird's-eye maple,” in providing the cabinet-maker with a fine grained and beautifully marked wood, equally useful for both solid work or veneering.

Bird's-eye Maple—for under this name we will consider it—is therefore that particular variety which we purpose imitating, and the chief character-

istics of which are a very delicate, irregular mottle upon a cream ground, interspersed with clusters of, and "straggling" small knots, and, entwining and encircling these latter, a very fine and graceful overgrain. The general color-effect of maple wood is of a decided cream, which, under the French polishing process, usually develops into a rich and golden tone. Although the natural color of the mottle is usually similar to that of the general fibre or ground color, a slightly cooler tone of mottle is usually adopted in graining the imitation, instead of simply a darker glaze of the same golden ground. The little knots—or "bird's-eyes," as they are sug-

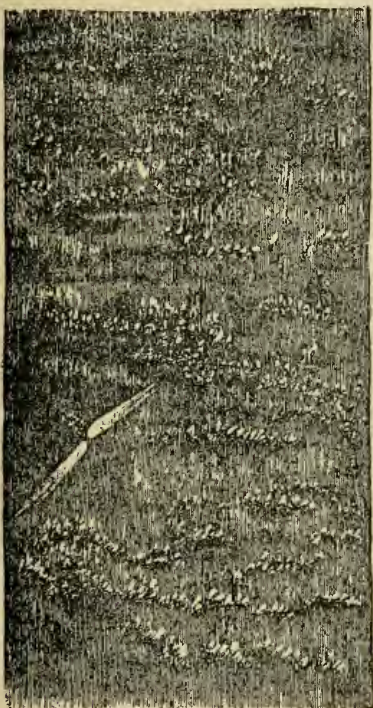


Fig. 1.—Bird's-eye Maple: First Stage.

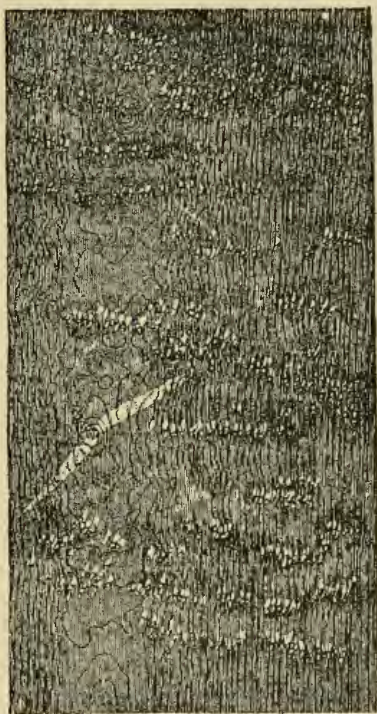


Fig. 2.—Bird's-eye Maple after Overgraining, etc

gestively termed, so much depth and transparency do they each present—and the fine overgrain are marked by a slight redness of color, and this is a point further to our advantage in graining the imitation.

Maple is a wood we seldom find used for household furniture in this country, although in the United States and those parts of America to which this species is indigenous it is much more favored; doubtless the higher cost of the maple over our equally serviceable but less beautiful native woods of birch, ash, etc., somewhat accounts for this. Its imitation, however, is almost as popular with us as oak, and, indeed, for many years it was the most favored imitation for the drawing-room woodwork of middle-class

houses. As it is my intention to consider the purely decorative aspect of grained imitations in a subsequent and separate paper, we may at once proceed to the imitative process.

The Tools required for Maple Graining by the distemper process are, generally, the same as those we previously used for imitating pollard oak, viz., thick hog-hair mottlers, a thin, stiff ditto, a sable-pencil overgrainer, the badger, a sable pencil, and, besides these, the maple-eye dotter and shader. A clean piece of wash-leather and a piece of soft sponge are further indispensable items to this and all other water-grained imitations. When graining the woodwork of a room of any importance, several different sizes in width of thick mottlers and sable overgrainers are very necessary, the former for making mottle of varying size upon the various surfaces and the mouldings especially, and the latter to allow us to accommodate our overgrain more naturally to the different surfaces of the panels and stiles. A thick mottler of some three inches wide is the most useful, and this, with one an inch wide, will usually suffice; the best size for sable overgrainer is from one and one-half to two inches wide, and the same width or smaller of thin, stiff mottlers is recommended.

The importance of cleanliness in working, and of purity of color and materials for every description of graining cannot be over-rated, and with imitations of so light and delicate a wood as maple or satinwood these conditions apply particularly. Brushes, vessels, pigments and work should be free from any suspicion of grit, grease, or dust; otherwise, however excellent the imitation may be, no good finish and effect is possible.

The Ground and Graining Colors for Maple require care and judgment in preparing. The ground should be quite opaque and of a clean, creamy white. The genuine white lead slightly stained with the best Oxford or Italian ochre (in oil), makes an excellent ground. Some experienced grainers prefer to give the ground a very faint pink tint with vermilion, and others prefer a ground slightly stained with the two pigments combined. These are points of personal election, for so long as the paint is kept from the two extremes of chalky-white on the one hand and decided red or yellow tints of ground on the other, the finished color is not very materially affected. The spreading of the ground requires, however, the finest brush-work; for should the work be left for the grainer with coarse, streaky brush markings, the graining color and varnish will bring them out very unnaturally and unpleasantly. The colors or pigments used for the graining vary considerably more with grainers than does the tint of grounds. Vandyke brown is the most convenient and gives good results alone; combined with a little burnt sienna, warmer tones are obtained, whilst we may occasionally see good executant skill displayed with very cool, black shades of mottling. In reviewing the general effect of these varying tones, the black-looking appears the least "happy" and natural, whilst decidedly warm mottling on the other hand detracts from the color of the overgrain. The Vandyke is

a good medium pigment, but personally I prefer a mixture of the *finest* burnt umber ground in water, combined with a little *raw Terra-di-sienna*. This mixture, as also the finest raw umber, gives, to the writer's mind, the nearest natural color of the mottle as well as the most pleasing general color. In graining all woods we usually aim at the color of the real wood when French-polished, and observation will show that, as before mentioned, a decided golden tint characterizes polished bird's-eye maple. For home or ordinary work, however, a Vandyke brown wash is admirable; and this having been prepared to the desired depth with weak beer, we rub it over

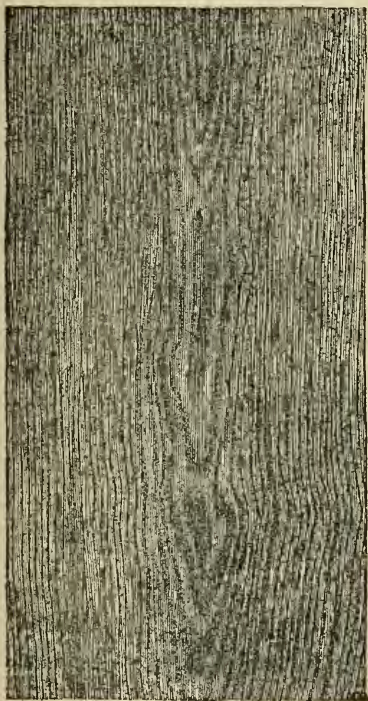


Fig. 3.—Pitch-pine: First Stage.

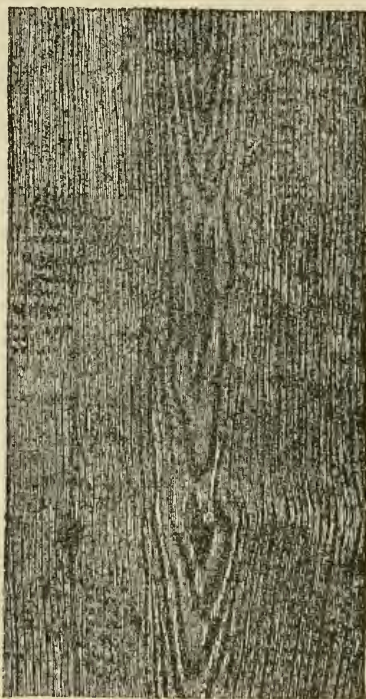


Fig. 4.—Pitch-pine after Overgraining, etc.

the practice-board with the large mottler and then proceed to imitate the wood in the following manner:

In Graining Bird's-eye Maple, the proper manipulation of and mastery over the mottler is a matter that will exercise the learner's patience for some little time, and he must not be discouraged at the probably unnatural results of first attempts. The action of this brush is to take out parts of the graining color and leave the remaining portion in the irregular but not erratic-looking form of soft shadows or mottle. Let us now assume that the panel has been evenly spread with the graining color, using the mottler or a large tool, and that here and there a few slightly darker touches of the same color have been put in towards the center of the panel with the sponge.

The badger is now taken up and the work "softened." By this softening the dark spots are blended into the general tone, and the color is sometimes brushed from the center towards the outer edges of the panel, thus getting away from the monotony of a perfectly "flat" looking mottle. On taking the large mottler in the right hand, it will be found that the fingers can grasp the hair—"dig into it," I might term it—at the base, and so break up the straight line of the bristle ends. When the mottler is held at nearly right angles to the panel, this action will cause the top of it to wipe out an irregular, undulating portion instead of a straight, square shape. We therefore work a large panel by wiping successive pieces out of the softened color with the top of the brush, leaving larger mottle at the sides, and working to smaller portions near the center and heart of the plank. To get a natural mottle of maple, a double action of the brush is often used, the second one cutting across the first at a very obtuse angle; hence it is best to first mottle from top to bottom of a panel across its entire width—in a slanting direction, and with due regard to the size of mottle, and then, after softening with the badger, to repeat the effect, but slanting the brush diagonally, as before mentioned, *across* the previous mottle.

Whenever mottling is done, we require a vessel of clean water at hand in which to rinse and dip the brush; the superfluous water, which would otherwise run down and spoil the "softened" color, is then pressed out against the leather, and in maple graining this is of much importance.

Mottling a panel takes longer and, indeed, is much more difficult to describe than to execute; for quickness must be worked for and acquired, not only to spread, soften and properly mottle a panel before it dries, but to further add the following work, viz., the knots or bird's-eyes, and the bright lights thereto. Although interspersed somewhat irregularly all over a panel, the knots mostly occur near the top edge of the portions of mottle. A single knot will show us upon examination to be a nearly circular dark marking with a bright spot in the center, and they occur in clusters and patches all over the panel, with "ones and twos" scattered between. To make the eyes there are several methods, the most convenient being the "dotter" before mentioned—a small camel-hair tool made hollow in the center, and which, when pressed against the color and then onto the panel, prints the dark shape, or knot. This tool is a rather modern notion, for in the old days the worker would either twist a little piece of cloth or leather into the desired shape and fix it to a wooden holder, use a sable pencil, or, for the commonest work, just dab the tips of his fingers on the panel, this latter getting results quite outrageous to look upon. The "eyes" should be put in with the "warm" color made with a little burnt sienna dissolved in beer and slightly softened in color with Vandyke or black. Although by these methods we form the dark parts of the knot, we do not get the bright center thereby, and when proper imitation is intended, this light spot must be taken out with the leather covered over a pointed stick or the

pencil handle. The small reflective lights must also be wiped out, and these will be found to spring from the eyes outwards across the mottle, coming to a point against the knots and softening off like the overgrain of sap, only of a smaller size. All the imitative portion so far described should be done without stoppage and before the color dries, when it is possible. For the best work and in hot weather, we are often unable to get beyond the spreading, mottling and softening ere the water evaporates. In such a case we leave the panel to get quite dry, proceeding with other portions, and then wash out the large mottler in clean water, and wet the panel by drawing the brush carefully down it. The use of beer is not necessary for binding, except with black, but it makes the color safe for this wetting, and also keeps the work from drying so rapidly, therefore I advise using it. When the panel has been wetted over, the knots and reflective lights may be put in, and the work left as in Fig. 1. The final overgrain should also be put upon the panel in its wet condition, and this delicate work is softened outwards as it is executed. It is put in with the burnt sienna color and the sable pencil, working from and around the knots in irregular, concentric lines from the heart and in the manner illustrated in Fig. 2. When the central heart-grain has been penciled from top to bottom of the panel, the sable overgrainer completes the work on the sides, following the formation of the pencil-work, and gradually working into regular straight markings. A few delicate touches of red shading under the little knots are then put in with the shader or pencil and softened downwards, both these and the overgrain being kept unobtrusive in tone and depth of color. The work is then ready for varnishing, and for which the lightest copal varnish is necessary, otherwise the "ageing" of the latter will soon destroy the delicacy of the imitation.

Graining Maple in Oil is a process that has little to commend it, unless the imitation has to be worked on surfaces exposed to all weathers. The ground is prepared with the best brush-work, and the graining color, made from the finest pigments ground in oil, requires the same working qualities as properly mixed graining color. The usual methods of mottling in oil are either by working a damp wash-leather over the panel (as described in my previous paper for pollard oak), or by drawing down the face of the panel the hard edge of a strip of buff-leather, which takes out the color in irregular patches, but hardly with a natural-looking result. Any worker who has followed me so far with success and is able to execute maple in water, will scarcely need more than these few lines to put him in the right track; continuous practice and imitation of the genuine wood will then complete his training.

Graining Pitch Pine is a subject that will well repay study and practice. There are two good ways of imitating it, the first, according to my illustrations, Figs. 3 and 4, being executed in water color, and the other method that of graining the heart in oil, just as the sap of oak is wiped out with

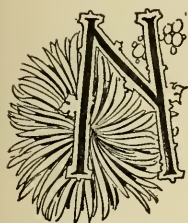
thumb-piece and rag, and then using open, leather or cork combs for the plain outer grain. Although any good light oak ground will serve for pitch pine, I prefer the finished effect which is obtained by working over a light buff color, which shows a decided but soft *reddish* tint instead of a *yellow buff*. For graining in water, take a little raw sienna ground in water, and slightly "warm" it with burnt sienna, diluting with weak beer as in maple-graining color. Spread this wash evenly with a tool over the panel, and then with a goose sable pencil run in the heart-grain using a slightly deeper shade of the sienna color. After putting in the center grain, take the pencil overgrainer, sable or fine hog-hair, and draw it down the sides to get the straight outer grain. A touch of Vandyke brown may be used to slightly darken the knot or heart, but the grain otherwise should be the same *tone* as the ground paint. Before the work is dry, the heart-grain is softened and graduated with the badger as when overgraining oak (Fig. 3). To get the best results the work must be "bound down" with varnish, and then rubbed over with the same graining color, and mottled after the style of working maple (Fig. 4). This method gives the worker good scope for his skill, and when varnished may often be mistaken for the real thing, even by experienced painters.

Pitch Pine Grained in Oil has one advantage over the above—it requires no binding down before the overgrain or mottle is put on. To wipe quantities of sap-oak in oil, naturally and without repetition, is a hard task to many a worker who, however, will find the pencil work much easier, cleaner and quicker. The mixing of a sienna oil-graining color, the method of spreading it and the manner of wiping such figure, are matters that have all been thoroughly explored in their connection with oak graining; the only material difference between wiping sap-oak and pine-heart is that a good, "springy" badger or a hog-hair softener has to be used to work up the wiped figure in the center and to soften the hard edges of the combed grain at the sides.

In closing my directions for imitating maple and pitch pine woods, I need scarcely point out the necessity of working from a good natural specimen or, the next best thing for the time being, a properly grained imitation of the wood we are studying. When beyond this stage, and the learner applies his skill to graining furniture and the woodwork of buildings, the previous directions I have given—as to contrast and sharpness of rail with stile, the simplicity of figure and grain upon moulded surfaces, and the due subservience of the work on the framing or stile parts to that contained in the panels—must all be remembered and intelligently followed, to the end that the grained door presents that repose in its entirety which we find in the best woodwork.

CHAPTER IX.

GRAINING MAHOGANY AND SATINWOOD.



NO PARTICULAR VARIETY of hardwood has been used more extensively by the cabinetmaker than has mahogany; and no higher value has been placed upon either native or foreign grown tree than is recorded of the finest Spanish mahogany. Such being the case, it is, I believe, a somewhat rare matter to come across instances of its general use for the best woodwork of buildings until

within more recent years. The erection of vast palatial buildings—the hotels, club houses, museums, and other national piles, which mark the Victorian era—has however, created a demand for materials—marbles and woods—for use in their interiors which our forefathers never dreamed of so using in this country; and whilst, apparently, mahogany has thus “come into fashion,” for doors and such-like solid woodwork, it has “gone out” somewhat for its original purposes of cabinet work.

This modern introduction of mahogany in the buildings indicated has naturally not been without some influence upon the architects and owners of less imposing edifices, so that what in earlier days would have been an oak door or paneled dado is now often substituted by mahogany—or that in combination with another wood. Such, in any case, has been the result of the writer’s observation and experience gathered in various directions.

Oil Grounds for Mahogany Grinding are best made with a basis of white lead, and in the same manner as oak grounds are prepared, then stained to the desired depth and strength of color with pigments ground in oil. *Venetian red* of a good quality is the most useful color for this purpose and as it gives with white lead clean and bright tints, the addition only of a yellow pigment is required to make a good mahogany ground. The amount of yellow the grounding paint should give to the eye is a question that most grainers have each their individual notions upon. In cases where the imitation is desired to match with a piece of the real wood, an experienced worker can soon settle the point by judging the light portions of the mahogany against his paint, and making the latter slightly lighter than the real wood appears. Orange red with white lead is the favorite tint of some,

but upon such a bright ground there must be the best of skill and judgment to get a good imitation. The two reds and white lead, or Venetian red, orange chrome, and white, give a good ground for light mahogany ; but for all-round and general purposes I rather advise the white lead being stained by the best Venetian and bright yellow ochres, which give a medium orange tint, clean in color, but not vivid in brightness. Experience in this matter will come soon enough to the learner ; meanwhile the above will guide him.

The many varieties of figure and mottle which are to be found in mahogany wood are altogether beyond the scope of these papers to consider. I will therefore confine this description to the two principal kinds, usually known as "feathered," or Spanish, mahogany and baywood, the Honduras variety of the wood.

Baywood is usually considered an inferior article to the feathered mahogany ; but for general imitative purposes its appearance is much to be preferred to the latter. When elaborate and brilliant mottling and feather are put into door panels, they seem to overpower the plain stiles, and there does not seem to be the repose in its entirety which we obtain by nicely worked baywood graining upon a door ; whilst, furthermore, it takes a skilled worker to get a *good* imitation of the former.

Imitations of Baywood—like all descriptions of mahogany—are best grained in water colors and upon a hard and fairly glossy grounding paint. The ground should not be spread until a day or two before the graining. When it has been painted a week or two, it not only gets dirty, and often knocked and dented, but the water colors spread with much difficulty ; and, in fact, it is necessary to dampen down the work with a little whiting water and a soft rag or sponge. Freshly grounded work can be grained upon without this process, a little extra rubbing with the tool or mottle only being necessary to spread the water color. The ground for baywood is rather lighter than for Spanish mahogany ; a little more white lead proportionately and the stainers before mentioned will therefore produce it. The chief, or general, features of baywood are a fine grain running lengthways of the wood, crossed by mottle of varying depths and sizes, and through the whole of which a species of fine overgrain runs lengthways of the wood, similar to the outer overgrain of maple imitation. To produce this effect upon our painted ground, we take a little of burnt sienna and Vandyke brown ground in water, and mix them to the desired depth in a vessel with a little beer and water, and keep also a little of each pigment handy where-with to darken the same if desired. The tools required for mahogany are the usual "badger" softener, the large mottler, a piece of sponge, tool brush, the sable and thin hog hair overgrainers, and one or two camel hair mottlers. We commence by rubbing in the panel with either tool or mottler, using the mixed wash, and then wipe out some parts of it light by either drawing down the mottler sideways or using the piece of sponge. The mottler is then rinsed and wiped, and drawn down the panel, using the top

only and with a light hand ; this will soften the light into the darker portions, and will also give a slight appearance of the general grain. With the large mottler, and using the point only, we now draw it down the panel, leaving here and there lighter spaces and masses of mottle, chiefly upon the light portions of the work. Then taking up the camel hair mottler, we quickly mottle across both the dark work and the mottle just formed, making bright and sharp lights. This having been done before the panel can dry, we lightly badger the mottle crossways of the panel, and leave it to dry. The final overgrain is then put on by using the thin hog hair "oak" overgrainer dipped into a deeper wash of color, and the hairs then divided with the grainer's comb made for such purposes. When executing a nice imitation of this variety having much mottle as above described, the overgrain may advantageously be worked for a slight distance with the pencil, thus getting an irregular heart grain, which the overgrainer is worked up to. As in maple, this last portion is "softened" as it is worked. The plainest variety of baywood may also be imitated by making the shades in the color, as we spread it, more distinct, and sometimes giving the work a decided curl ; we then mottle with the camel hair tool to a less extent than above, soften it, and get the undergrain effect by sharply stippling over the plainest parts of the work and lightly softening this, lengthways ; and, finally, we overgrain as above with the hog hair tool.

Feathered, or Spanish, Mahogany has usually a deeper color of ground, and the graining mixture is also used much stronger, so that the mottle is sharper and more brilliant. In the best polished specimens of Spanish we see also a decided purple or "lakey" tone of color, and this we obtain in our imitation by substituting a little victoria, or mahogany, lake for the burnt sienna. The lake pigment is purchased ready ground in water, and is inexpensive enough to warrant its use by the grainer. Vandyke brown alone, or mixed with the lake and a little beer, may be used for first rubbing, in the panel, but the lake is most necessary and effective for the final glazing of the feathered mahogany. The best samples of this beautiful wood present to us, in the case of a panel, a rich and dark center portion, with the extreme limits of such at its lower end ; out of this there springs a bright feather "stem"—if it may be so termed, from which, on either side, bright silky mottle is thrown, and falls like the shape of a feather in graceful and regular lines. The center stem itself has usually a slight curve, and the top dies away into mottle like the off-shoots on either side. Nothing but a real specimen can give the learner a true notion of the nature of this wood, and the imitation can only be successfully learned from such.

The working method in general use is to quickly rub in the panel with the mixed graining color, and then with a large flat fitch to put in the dark tones of the center in consecutive portions. Commencing at the base, we make a dark curve with the brush, then leaving an intermediate space of the general color, we put in a second curve rising above the first, and gradu-

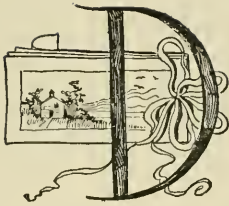
ally decreasing them in size and strength of color towards the top of the panel or surface. Without loss of time, we take up the *thin* hog hair mottler, or "cutter," and with its top, used edgeways, cut out the bright rising lights which form the stem, end which then spray out on either side, as I have described. We next take the camel hair mottler, or, preferably, a "burnt-edge" mottler—especially if the former is quite a new one—and with this we put in the sharp, brilliant, and silky lights which flow out of the center, giving them the naturally curving inclination, and avoiding any straight and harsh cuts or lights; this the camel hair brush, with its pliable hair, enables us to do, and also lifts the color off sharper and cleaner than does a long hair brush. As I have instructed in previous papers, the mottling tools require repeated rinsing in clean water, and then wiping on the leather, to free them from the color taken up, enabling us to mottle sharp and clean. As in graining bird's-eye maple, the mahogany may now be wetted over, by drawing the mottler and clean water down the panel, and the contrast heightened by sharpening up lights and adding dark touches of color with wash leather and pencil respectively. The overgrain is now put in, using the thin hog hair brush, and working the grain after the formation of the darker curves of color—hence *crossing* the center of the feather. Starting upon the one side, the brush is drawn gently up, twisted carefully across the feather with a wavy and spreading motion, and then returned down the opposite half in similar manner. As each journey is made we "badger" the grain slightly upwards from the base before it sets, and then leave the work to dry. The next process is to bind the graining down with, preferably, a coat of varnish, or else japanner's gold size and turps. Upon this we work the final stage—a rich *overglaze*, as it is termed. Taking a wash of mahogany lake and beer, we rub it all over the work, and with the damp wash leather we make a pad, and partly roll it over the work. This method leaves an irregular mottled effect, not decided enough to clash with any of our figure, but sufficient to give a relief to the plain portions and a rich general tone to the whole imitation. Should the previous work have plenty of variety and figure, it may be best to merely rub over the afterglaze and so soften it without mottling; this question, and also the further advantage of strengthening any other previous work, are matters for individual decision.

Graining Satinwood is a process so similar in method and figure characteristics to mahogany, that the learner can execute the one with equal facility to the latter. Although both belong to the same natural order (*Cedrelacoea*), the satinwood is really one of the cedar tribe, but differs chiefly from mahogany in its color, which is a rich golden yellow. The ground and general tone of satinwood are nearest to maple, but the former is rather fuller in color. The oil paint for this imitation must therefore be stained to a delicate cream with yellow ochre, and our surfaces must be very finely prepared and painted. The graining color with which we work

the curls and mottle as in baywood should be *raw terra di sienna*, finely ground in water. A little finest burnt umber or Vandyke brown may be added to the sienna when we wish to soften down the color, and a judicious combination of the yellow and brown pigments gives the most natural effect. In graining a door, the curl or feather is usually put in the panels rather softer in contrast than with feathered mahogany, and the surrounding mouldings and stiles are best mottled with some slight coolness of color and in a simple manner. The final overgraining, with the sable pencil or hog hair overgrainers, is executed in precisely the same manner as in working mahogany; the color used may be either a darker tone of the graining wash, or with a slight tinge of redness added to it. If satinwood be worked cleanly and quietly, care being taken to obtain soft *final* colors, it is an imitation that can be most advantageously introduced into the best decorative effects, and will harmonize with many color schemes adapted to the drawing room. As with maple graining, the varnish for satinwood must be the lightest copal that can be obtained.

CHAPTER X.

GRAINING ITALIAN WALNUT WOOD.



DOUBTLESS most of us are familiar with the nature and beautiful markings of the wood of the walnut tree ; and although he would be a *rara avis* indeed who did not know its fruit or kernel, there are undoubtedly many persons who could not distinguish the growing walnut tree half so readily as the invaluable oak or the less useful chestnut. Judging from the name by which it is popularly called in this country, one would suppose that the *nut* was, if not the only one, albeit the principal feature of the tree's commercial value. That is not the case in this age, we know full well, since the enormous quantity of walnut wood that is used annually in the manufacture of pianos alone must be an item of great value.

To all intents and purposes we may consider the walnut tree a native of England; for although we cannot be certain, as is highly probable, that it came here "with the Roman invasion," the knowledge that it has grown in England for over three hundred years is surely sufficient for its classification as such. Although its original native land is generally believed to have been Persia and the regions of the Himalayas, the walnut tree is now largely cultivated throughout south and temperate Europe, from whence, as well as from still more eastern parts of the globe, enormous quantities of walnuts are exported. More southern and sunshiny latitudes than those of Great Britain are necessary, however, for the tree to attain full growth and a ripe age; hence it seems to come naturally about that the wood of the *Italian* walnut—from the country where the beauties of nature and art alike seem always pre-eminent—should be the most richly marked and highly prized.

Italian Walnut Wood is chiefly noticeable from its masses of beautifully knotted and curled grain, rather darker in general tone than the ordinary piano variety, but equally rich and clear when properly prepared and polished. In compiling this lesson upon graining such a very useful and ornamental wood, the heading of my paper was used, not with a view of devoting the space entirely to imitating none but the very richest variety,

but chiefly to distinguish in a literal sense as well as in the learner's mind the ordinary curly, knotted and mottled walnut of commerce from its less pretentious but equally serviceable relation, the black walnut, or, as it is generally termed, American Walnut.

Grounds for Walnut Graining, although varying slightly in depth according to the intended finish, should always be of one class of coloring: viz., a soft drabby brown. Words are a poor means of interpreting color, but if the prepared white lead paint is stained with yellow ochre and Venetian red, used in equal proportions, until we get the desired strength, and

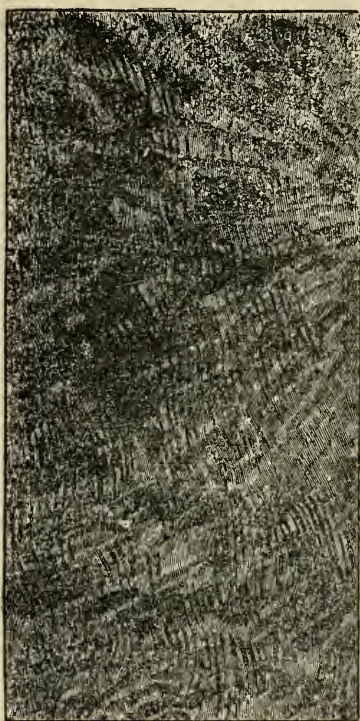


Fig. 1.—Graining Italian Walnut: first stage.

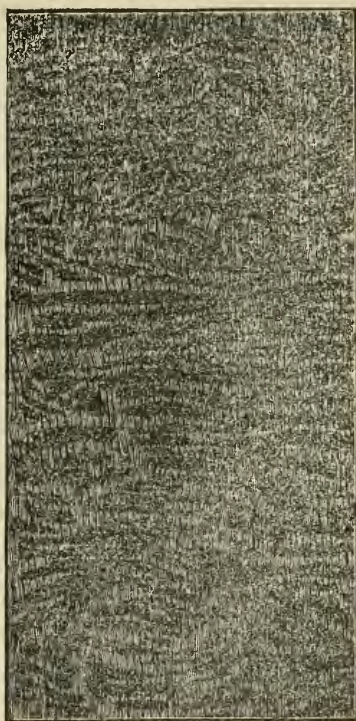


Fig. 2.—Graining Italian Walnut Mottle and Undergrain.

the resultant mixture afterwards sobered down with burnt umber until it becomes a leather color, then the worker will obtain the tone alluded to. If we wish for a lighter class of walnut graining, one in which the grain and figure will be more distinct, the same tone should be used, only, of course, the white lead being in greater proportion. Very often one finds walnut being grained upon paint in which scarcely a trace of umber can be seen; the consequence is that either the graining color is used weak and thin, so that the graining, viewed on its completion, looks "foxy"—i. e., gairish, in color and feeble in form; or else it is the other extreme, in which the figure can be traced from the opposite side of the road. The best

demonstration any student can have is to grain a panel upon both the bright and the drabby grounds, varnish them, and not only compare them with a piece of the real polished wood for natural color, but further, carefully weigh the relative merits of each for *repose* and *richness*.

Graining Walnut Wood is, to any worker who has mastered the use of his water-graining brushes, is a most pleasant and entertaining work. The usual method is the distemper, or water-color process, and the tools required are similar to those previously advised for pollard oak. These will be found illustrated in the preceding papers, and need not be here recapitulated. The pigments required, to more or less extent, for walnut imitation are the invaluable Vandyke brown, burnt terra di sienna, lamp or ivory black—preferably the latter—and a little of Prussian or indigo blue. These pigments are already familiar to those readers who have followed this series through the preceding papers. They are material colors of strong natural staining powers, and an ounce of each will suffice for a large surface of graining. For home practice and all ordinary purposes, the blue pigments can readily be dispensed with; they are rather costly, and may be difficult to obtain ready ground in water. The only one of the list that can be rubbed up upon the palette is black; all the others are useless, so far as good work is concerned, unless very finely ground and of the best quality. Walnut being an imitation into which black, a bad binder, enters largely, it is advisable to use beer and water in about equal parts for our fluid. Before commencing the work, the grounding paint should be lightly glass-papered with No. 0 or 1, and well dusted down. If the paint is very hard, and has been standing any length of time, we must also prevent our water-color from cessing—running off—by rubbing the ground with a little dry whiting on a rag, or by giving it a preliminary rub over with a sponge of beer-wash. Having now at hand a little fluid stained with Vandyke and sienna—the darker our imitation is the more Vandyke in proportion—we take a large worn-in tool or the large mottler, and rub over our surface, not too sparingly, but avoiding sufficient to cause it to run. Before, however, we take further action, there must be a mental decision as to the disposition of the figure. For instance, given a panel say 24 in. by 15 in., we might occupy the greater portion of it with one large cluster of knots and encircling grain, and surrounded by plainly grained parts, as is characteristic of the best Italian. Again, we may get another good effect by working in two or three separated and smaller clusters of knots in one flow of grain—an appearance which is more common. Mottling this stained wash is the first action; and if we work on the former plan we shall mottle our surface small and delicately across the panel, but *fully* under the greater part of knot-mass and more sparingly and broader under the surrounding plain grain. We also, whilst mottling straight across the panel, follow the general curve of the outer grain (Fig. 1).

In imitating the second variety, we may mottle on more regular lines straight over the width of the surface, accommodating it slightly to the in-

tended plain and knotted parts, but following no decided curve (Fig. 3). Whilst still wet, we soften with the badger and let it dry. The next step is to imitate the delicate pores or under grain, and this is obtained by using the thin "oak" overgrainer. By separating the hog-hair of the brush after it is charged with color we get distinct divisions, and in this manner we go over the panel, always working in wavy, tremulous lines and curves across the previous mottling. In the same manner as advised for pollard oak we must carefully soften this work outwards or upwards whilst wet, and thus obtain a light inner, and dark outer, edge or grain. This must be kept

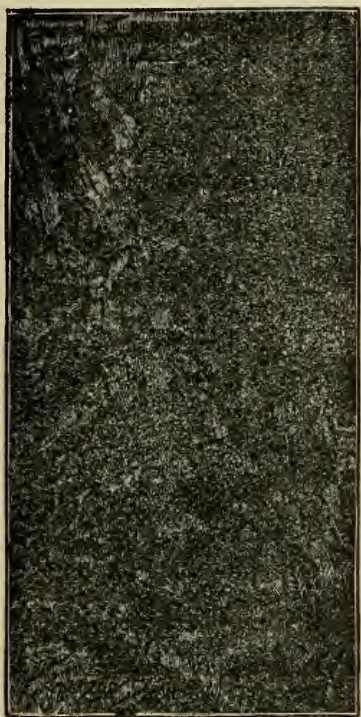


Fig. 3.—Graining Italian Walnut:
final stage.

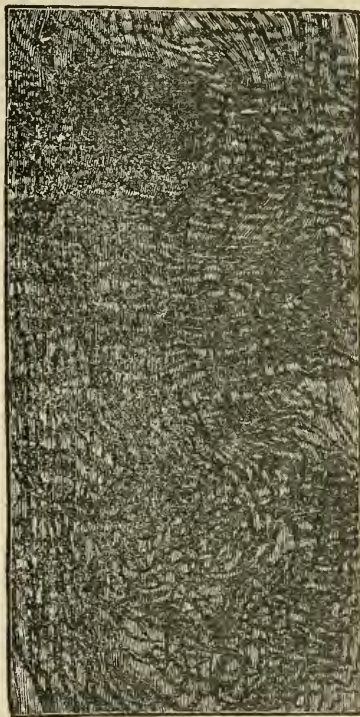


Fig. 4.—Graining Italian Walnut, Fig. 2
with Top Grain but unglazed.

quiet and subservient to the after process; and if we desire it, upon the ultimate plainer parts we may subdue the under grain and stipple it instead, as with mahogany.

The next process is to imitate the curly and prominent grain of the wood, and which, upon inspection of a real sample, will show a considerable variety of color tone as well as depth. Some leading veins will appear quite black, others a rich warm brown; whilst the bulk of them give various shades of deep brown of the Vandyke tone. Now, in order that these veins may sink into and become, apparently, part of the wood, we adopt a double method of softening them. Taking the large mottler we well rinse

the color out of it, and then draw it quickly and lightly down the panel until the latter is nicely wetted all over. The thin hog-hair oak overgrainer is then dipped into a stronger beer-wash, and worked into our black and Vandyke pigments—which latter should be rubbed up separately, and ready to hand in a liquid form. The make of the overgrainer, which naturally separates itself into tufts of ever-varying size, enables us, therefore, to work in the prominent grain with despatch and variety of result; and the effect therewith obtained is infinitely superior to anything we might attempt with the pencil, and by making one vein at a time. As this part is the most important in the imitation, the mind must work as rapidly as the hand. The main lines of the panel we have already shaped out by the mottling, etc.; but whilst we duly follow that lead and work the veins across the mottle, we have the natural play of grain, the sharp and subtle curves, the widening out and closing up of the veins, caused by pressure upon the tufts, and the variety of color—all these points to see to in the manipulation. For the richest Italian walnut (Fig. 4), although by expert twisting of the brush we may make the most natural-looking masses of knots and curly grain, we may with more advantage leave the inner parts for filling in with a pencil and black pigment. The advantage of working the main grain upon the wetted surface is that the veins partly soften themselves, and we also get more time for the process. This softening with the badger must be effected as we go along, and by gently brushing across the grain we get a natural light and dark edge. When the veins lie very close together we are liable to blur one into the other; this is an effect we must avoid, even at the cost of a few hard veins. From this fact it will be gathered that the grain must not be worked too close nor too regularly. If, after making the best use of the overgrainer, we desire to further “work up” the panel, we proceed to wet it all over as before, then put in the inner knots, touches of black or strong veining, with the sable pencil, and finally soften as before. Should we attempt to do this without the wetting, there is a danger of spoiling the panel; inasmuch as we cannot judge how the colors and grain look when varnished, which the water enables us to see.

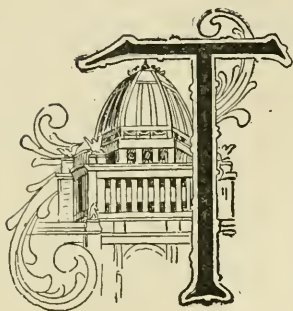
Glazing Walnut Graining is the last process, wherewith we obtain the final color, and subdue and heighten different portions of our work. It is in this glazing treatment that the advantage of sober grounding color is most apparent, as we are enabled to use rich and warm pigments without any unnatural crudeness. Before this glaze, or transparent wash, can be applied, we must secure the previous work with either thinned coach japan or, far more preferably, with the same copal varnish as we finish with. When the binder is dry we spread the wash, making some parts quite warm with the sienna, and other parts, especially the knotted work, stronger and deeper in color with Vandyke and black. If extreme richness is wanted, the introduction of a little of the transparent cool blue, judiciously placed, will, by force of color contrast, help to this end. The tone and depth of

the glaze being right, and the same spread evenly, we take the damp wash-leather, and roll it over those parts where a soft mottling effect is wanted and then, with the thumb and leather, wipe out the brighter lights across the knotted work, and carefully soften the whole. As our coat of varnish has "brought out" (Fig. 2) all the work previously put in, we are able to judge if it still requires any finishing touches, and if so, these can be done whilst the glazing is wet. One good finishing coat of copal varnish can now be given, and, if possible, let it have an extra coat a few days afterwards. If aiming at a smooth surface, like polish, it is necessary to rub the first coat slightly down with thick felt and finely pulverized pumice-stone, used with water, and finally, well rinsed down. A serviceable, but of course less effective, cheap plan is to rub with fine emery-cloth, and then wash down. In every case have a care that the graining is not rubbed into little white specks, arising from want of fineness in the paint, etc., beneath; far better to sacrifice the smoothness.

The arrangement of Walnut Graining upon Woodwork is a matter worth a little attention here. In the first place, the worker must remember the cost of time, and therefore aim to get the most effect and natural breadth according to these commercial circumstances. Let the panels of doors, and where most seen, be the best and richest portions; keep the mouldings dark but quiet in grain; if acceptable, black them as *ebony* imitation; and in every case let the surrounding stiles and rails be a foil and relief by their plainness to the richness of the panels. Let rail and stile be equally distinct in *grain* as with oak, but rather less in *depth*, since there is not in nature the same play and action of light as with the former. Always reserve the pencil for only the best panels, such as will probably have a close inspection; but even then do not sacrifice breadth to detail. These directions, if intelligently followed and persevered with, in conjunction with a good piece of mounted veneer, will soon lead to successful imitations of walnut wood.

CHAPTER XI.

IMITATION OF WOODS BY PLAIN STAINING AND GRAINING UPON UNPAINTED WOOD.



THE PRACTICE of staining light and inexpensive woods to the colors of more rich and costly varieties is a branch of graining—"sham" though it still is—that few persons will object to. The advantage of being able to get a permanent and decorative finish upon new wood without the important outlay of preparatory painting is so apparent to all, that a first place of interest will readily be given to a paper dealing with such. Under this heading we have two distinct treatments of imitations—the first wherein the color effect alone is sought after; and the other, that in which the figure and particular characteristics of the wood are also imitated. Without attempting to follow the theory of the matter beyond the simplest lines of consideration, it will be readily granted that both of these methods have their proper sphere and limitations. The description and quality of the wood stained is a most important factor of its successful treatment. For instance, we may stain white wood with the colors of light oak or maple, and obtain a rich and satisfying effect. Apply, however, the same transparent glaze to sappy and knotty deal, or, on the other hand, to light pine with a strongly marked grain, and we feel at once color and grain do not agree. Red pine of the ordinary class, such as its imitation described heretofore in these papers, may be greatly improved by staining to the effect of American walnut; but were we to grain upon it afterwards the figure of ordinary knotted, or Italian, walnut, then an unnatural attempt at combination is at once apparent. The very common and popular red staining of the poorest and cheapest articles of furniture—presumably in imitation of mahogany—strikes in the mind at once a note of discord. Mahogany is an expensive wood, we know, and therefore imitations of its color on wooden rubbish are rather objectionable. Then again the color of even the cheapest mahogany cannot be obtained by a bare coating of stain, so that it is not satisfactory from either point—consistency or appearance. Mahogany, wal-

nut, maple, and other choice woods—particularly those which are best imitated in distemper color—can, however, be beautifully grained upon prepared plain wood, with results almost equal to anything we may execute upon painted grounds. As in most of these dark varieties it is necessary to first stain the wood a general color, we will now briefly notice the pigments and fluids most serviceable for plain-staining purposes, considered not from a dyer's or French polisher's but from the painter's and grainer's point of view.

Preparation for Plain Staining is a matter of circumstance, depending upon the nature the wood stained and of that to be color imitated. If the timber is of the poorest quality, soft and sappy, the better plan for cheap work is to ensure more regular color by first giving it a coat of clear glue size of fair strength. This is no lost labor since all common staining requires to be sized to bear out. It is, however, advisable that, for floors and all similar surfaces exposed to hard wear, the stain should be applied first; otherwise, instead of sinking into the wood, the color is merely lying on the surface, and is more easily worn away. In dealing with ordinary house woodwork, cheap panellings, etc., the size before oil-stain is recommended. When the former is dry, it will be found that the oil-stain, or "graining color," can be spread much better and more regularly, and that those sappy places which would otherwise have absorbed much stain are scarcely noticeable. In sizing white or stained wood, poor work often results from the "quirks" and mitres of mouldings being overcharged with the "froth" of the warm size. This can be easily avoided by adding a little turpentine—about one teaspoonful to the pint of size—which will prevent much of this "frothing" nuisance. For preparing a higher class of woodwork the color of which we chiefly desire to alter, there are several better methods open to us. When we have a good specimen of pitch pine which is required to be stained down, say to an American walnut shade—and in which it is most effective—we may first coat it with either coach japan gold-size diluted with one-third of turpentine; or with raw linseed oil, a little "turps," and about one-tenth part of good liquid driers, or terebine. The dilute gold-size is the most costly and quickest, as it may be stained upon in a few hours; but for equal permanence and cheapness the drying-oil is the best. Both are brushed on in the same manner as varnish is applied, only rather more sparingly. When plain-staining or varnishing very white wood, it is often necessary to avoid all possible after-discoloration arising from the oil darkening with age; and since it is prepared from the same source, the gold-size, unfortunately, is liable to the same defect. Here, then, it should be substituted by using gilder's "clear" size, or a thin coat of white shellac and then the whitest oil varnish for the finish. One drawback common to sizing is the tendency of the fluid to raise the surface grain of the wood: this is particularly the case when the size is used hot, and therefore such must be avoided.

Mixing Oil Stains—viz, those prepared with a drying-oil and painter's pigments—is a simple matter. We may take three parts oil to one of turpen-

tine, add the liquid, or even paste, driers as above-mentioned, and then the simple addition of "stainer" completes the mixture. As advised for preparatory coating, japan gold-size and "turps" may be used for the liquid, or, better still, copal varnish may be stained and diluted with "turps." The advantage of using the two last-mentioned is their quickness of hardening; whilst the cheaper oil mixtures are far better for spreading evenly and regularly over large surfaces. I have gone somewhat minutely into this preparatory consideration, knowing from practical experience how often the want of a little elementary explanation will mar the whole work on completion. I now append a few details of color-stains, which, with the foregoing, should suffice the worker for all ordinary purposes:—

Light Oak Oil stain may be made from raw terra-di-sienna, with the addition of a little raw Turkey umber.

Medium Oak Oil stain from raw sienna and burnt Turkey umber.

Dark Oak Oil stain is best made from burnt Turkey umber alone; the yellow cast of the copal varnish, which it is supposed and intended should be used for finishing this class of work, is here sufficient to give the required trace of yellowness.

For Antique Oak-stain, a mixture of ivory black, finely ground, with a very little burnt sienna. Vandyke brown alone makes a deep rich stain, its color, when ground in oil, being not so red as when used in distemper. This pigment, being a notably bad drier, requires fully double the usual quantity of terebine added to the oil fluid.

Walnut Oil-stain for varnishing upon, without any after-glazing and figuring, may be colored with burnt Turkey umber and a little ivory black. For a "ground-color" stain—viz., whereon we wish to grain walnut figure—raw umber is the better pigment, since its subdued tone contrasts more naturally with the after figure work.

Oil-stain for Pitch Pine.—Raw sienna with the addition of a little burnt ditto, make a rich pine color for staining on light wood; a little burnt umber can be added if the siennas alone are too red. Red pitch pine is very largely used for house woodwork in England, especially in the neighborhood of seaport towns, when it is usually imported direct from the Baltic. In most instances the pine is cheaply prepared, and varnished with copal. The presence of so much resin and matter of a discoloring nature in pitch pine soon causes a very appreciable darkening of the original color; hence, when it is desirous to keep the wood permanently light, the copal varnish used should be of the whitest make, and the size be either strong "parchment," or the special light coach japan. All holes, etc., should be carefully stopped with common putty of two shades, colored to match both the ground and grain of the wood, *after the sizing*. A day or so to allow it to harden before varnishing is advisable. When the real pine is desired to be stained much darker, besides the umbers, Vandyke brown, and black pigments, we may use diluted washes of either black japan or Brunswick black. Only those of

a thoroughly good quality should be used, and with pure turpentine for thinning. When staining pine dark, it is preferable to use the stain *before* sizing; if the grain is desired to be very prominent, a full coat should be spread, and then shortly afterwards all the stain lying on the surface may be rubbed off with old cloth or rag free from "fluffiness"

Mahogany Oil-stain can scarcely be obtained of a good color by ordinary brush staining. Burnt sienna alone is somewhat gairish; and the only perfect substitute for the Victoria lake used in distemper graining is madder lake, which is too expensive for ordinary cases. Whenever cheap mahogany stain is required, it should be made nearest to ordinary baywood. For furniture and "better-class" work, a good mahogany effect may be obtained by oil-staining with burnt sienna and Vandyke, and, when dry, overglazing with ordinary Victoria or mahogany lake in water. If the wood is at all sappy and strong in markings of nature contrary to mahogany, it must first be sized, stopped, and then oil-stained.

Cheap Water-stains may easily be made from any of the above pigments. Whether used for oil or water mixtures, they should always be purchased ready ground and of decorators' quality, those in pound and half-pound collapsible tubes being by far the best and cheapest for good work. Nearly all these colors have a natural binding quality with water alone, but the addition of a little beer will easily secure the stains of ivory or vegetable black. Water-stains must always be applied directly upon the wood; we therefore are at a double disadvantage when using such. The stain itself has no "filling" power, so that a *second* coat of either size or varnish is necessary; and water-stain does not spread so nicely with the brush as oil. A piece of sponge is preferable for using the former, and the best effect is got by wiping all superfluous stain off the surface.

Maple and Satin-wood, Imitations, when grained on white wood, are executed with the same water pigments and process as upon paint. The wood for these two varieties must be very free from grain or knot, and must first be once sized and varnished with the whitest materials. This gives a non-absorbent ground for working the distemper stains upon. When the figure is completed, another good coat of varnish gives a capital surface.

Walnut, mahogany, and similar dark woods must have the grounds sized, and then colored with oil-stain to the nearest shade of the usual grounding paint. The size and stain together will suffice for working upon, but two coats of varnish are required for dark imitations of this kind. With walnut and mahogany the first coating is applied *barely* before the glazing, and a final flowing coat afterwards.

Notwithstanding the paper is compiled solely with reference to the painter's and grainer's usual work and requirements, the simplicity of most of these preparations will commend them to the occasional wants of all readers. A saving of labor is nowadays a primary consideration, and in this connection oil-stains, requiring only *once* sizing, are most useful. With the "semi-

chemical'' stain of dyer and polisher we have no concern here, although in a short lesson on inlaying methods some particulars of other permanent *colored* stains will be given.

Flat Varnishing or Dull Polishing may be used to much advantage in finishing any kind of copal-varnished or oil-stained surface. A simple preparation of the former can be made from a piece of genuine beeswax (size of walnut) dissolved, and thoroughly mixed by heat in pure turpentine ($\frac{1}{2}$ pint), and 1 oz. copal varnish added thereto. The latter method may be done by carefully dulling either varnish or polish with finely ground pumice-stone and felt (or a piece of soft cloth), used with water; then rubbing with putty-powder and Lucca oil for a final soft gloss.

CHAPTER XII.

GRAINING ROSEWOOD, AMERICAN WALNUT, BIRCH, TEAK AND OTHER FANCY VARIETIES OF WOOD.



THESE VARIETIES of native or foreign woods the imitations of which have already been treated in this series may justly be considered the staple lines of the grainer's craft. Beyond these there are, however, a useful selection of woods, without a practical acquaintance of which no competent grainer can rest satisfied. Ever-changing fashions in furniture and cabinet work have much to do with the demand for or the neglect of some of these imitations; I have, therefore, selected those likely to be of the most practical service to the worker of "to-day."

American Walnut is a hard wood so much in vogue at the present time and withal of such an admirable nature for painted imitation that I give it some prominence in this selection. The ground for this should be of the medium oak shade, but never much more *neutral* than the grounds for knotted walnut. Although a little Venetian red or ochre are required for the color, the burnt umber pigment must be in excess of both, a "drab" resulting.

If executed upon woodwork which is well lighted, the imitation is best without much contrast between ground and grain colors; but for ordinary staircases and dark positions the ground should be kept lighter, this plan being preferable to overloading the graining with strong glazes and black veins of pigment. In imitating this wood we may get a very passable effect in one distemper process; but for good work, binding down a second treatment is necessary. Assuming that an ordinary door is being worked, we will take the first method. The tools most useful for this imitation are a thin oak overgrainer, a large mottler or worn-in sash tool, a veining sitch, and the indispensable "water-tools"—badger, sponge and leather. Good burnt Turkey umber, finely ground in water, gives the best color for the graining; but as this is rather difficult to get, Vandyke brown may be substituted for it. A portion of this pigment being rubbed up with the palette knife and also a little ivory or lampblack—the latter worked

up with beer—they are placed handy in separate vessels; whilst some dilute beer will also be required. With the mottler, or large tool, we first rub in the panels of our door, dipping the brush first into the clear liquid, and then into the brown pigment. By using the brush slantways down the panel, we readily get a variety of *shades*, and give a lead to the grain. With the badger we then work in a finer grain, using it not as a softener, but with pressure upon the sides of the hair. After a little practice it will be found that every required variety of grain can thus be made, and a natural softness is finally given to it by delicately softening this work *across* the grain at a slight inclination. The panels are now allowed to dry, and for many purposes this is all that need be done to them. The stiles are next rubbed in and treated in the same manner, working up from the bottom, and finishing each rail and stile as we proceed. The moulding “quirks” must, of course, be done with the stiles, and the success of the latter will naturally depend upon the *variety* of color-depth and grain we get when rubbing in and badgering. If broad mottler is used for spreading the color, we may get the occasional effect of cross-reflected lights upon the stiles, and these in the badgering are broken up to the least possible extent. The mouldings are run in at the last, and with either a darker or lighter tone than the rest of the door, or, better and quicker still, coated with beer and pure black, in imitation of ebony. When well varnished this combined effect is very good, and particularly agreeable to those who believe in the grainer always “operating with reserve.” When “cost” is subjective to effect and finish, we varnish the first graining, and then with a hog-hair veining fitch proceed to run in the dark top veins. If the panel is now rubbed over with a *slightly stained* weak beerwash we can the better work the fitch and soften off the veins. The stiles may here be slightly darkened all over; they will then “cut up” and contrast much better with rails in which a little strong grain is put in, than were all parts to be equally figured. From the foregoing, it will be gathered that the badger is the most important tool used, and that for the threefold purpose of making and softening the undergrain, and for stippling the plainer portions, no better means could be desired, nor better effects otherwise obtained.

Rosewood, or Palisander—by which latter name it is generally known in continental Europe—is a variety of hardwood that is now rather out of fashion for furniture. There are very few persons, however, who have not seen it, if only in the form of a fancy writing-desk, or such article. As rosewood has characteristics not common to any other wood here mentioned, and since it is a very useful variety for ornamental work and imitation inlays, I append brief instructions for graining it.

Rosewood is found in many varieties in India, South America, and Africa; and that with which we are most familiar is of a dark and rich general tone, having a ground of red shades, and being beautifully marked with dark brown and black figure and veins. This red ground may be made with

Venetian red, a little white lead, and burnt umber. If for a bright and strongly marked sample, vermilion may be used with the Venetian, whilst yellow ochre will furnish more orange tones, if desired. The earlier grainers were rather partial to the bright reds, but the most natural and "restful" imitations will be obtained with softer and broken tones. In graining, we may with advantage use warm tones—Vandyke and burnt sienna—and also the cool tones of indigo or blue black; or for a simpler effect, a mixture of sienna and black will suffice. In both cases a good black pigment is required for the veins, and a little victoria or mahogany lake for the after-glazing.

The tools are those we use for mahogany and walnut, the appearance of rosewood partaking of the silky mottle and rich color of the former with some of the strong figure and veins of the latter. A thin "warm" wash of dilute beer being spread with the tool or mottler, and with varied and richer tones of color, the panel is then streaked into light and dark portions of wood. The light portions are now broadly mottled with a "cool" wash, and then the whole softened. Whilst still wet, we take the thin oak overgrainer, and put in the black and Vandyke veins, working the tool as for walnut, but with more black and less curly markings. The veins are now well badgered, and any plain portions may be stippled ere the panel dries. If desired, it may afterwards be wetted over with clean water and a broad mottler, and the black veins then worked up and added to with the veining fitch or sable pencil. Varnishing or "binding down," comes next, and then a wash of mahogany lake and Vandyke. This is slightly mottled or wiped out with the leather, the knots worked up and shaded, and then all softened with the badger, after which a good coat of varnish completes the imitation. The richness and beauty of good rosewood can scarcely be gathered from such small surfaces as were previously indicated. A piece of old solid rosewood furniture which recently came under my notice, and the wood for which had been brought to this country by a master mariner, was of such unusual beauty, that I was almost tempted to try and reproduce it in black and white herewith; but wiser thoughts prevailed. It consisted of a large heart-shaped centre or knot, out of which bright and reflected rays, or lights, spread out on either hand; shaping up and surrounding which was black veining of so pretty and symmetrical an arrangement, that had it been a grained imitation, I verily believe any person acquainted with the subject would have condemned it for this very prettiness. It is therefore advisable that the student of graining should endeavor to fix in his mind all such natural grain arrangements of the more costly woods that he may come across, and then work them out in his practice and study.

Teak is another variety of Asiatic growth, imported for the most part from India and Further India. It is of very massive growth, and its extremely hard and durable nature makes it invaluable for ship-building purposes. In the neighborhood of seaport towns we occasionally find it used for the ornamental parts of house woodwork and for furniture. Its varying qualities

of suitability for cabinet-work—some logs being much more amenable to fine work than others—give it only a limited scope in that line. In appearance it partakes of the grain of pitch pine, but in color, when polished, it more nearly approaches cheap walnut. It may be easily imitated in water graining, after the method explained for pitch pine. The ground is rather stronger in yellow than for walnut, and much lighter in tone. The graining color should be brown, free from any “lakey” tone—either burnt Turkey umber or black and burnt sienna—and the veins and figure pure black and very deep browns. The general method of working advised for the two preceding imitations may be followed for teak with equal success.

Imitations of Birch are seldom used for house woodwork, but may be usefully employed for furniture, since bedroom *suites* of the real wood are much in demand. As it is impossible to explain its exact appearance to the student by letterpress or verbal description, I merely append the simple mode of working it, which will be easily interpreted with a real specimen to study from. The ground is a light clean buff, made from white lead, stained with either yellow ochre or raw sienna in oil. In graining, we brush over the surface with a thin wash of warm brown, making the panel of two or three broad color shades. With a large maple mottler we then mottle from the darker parts into the light, working slantways as for maple, but leaving a broad and stiffer mark. While this is still wet we soften the panel, and then slightly mottle across the previous work to break it up. When this is thoroughly dry we carefully wet the work over with clean water and a clean mottler, and then put in the darker overgrain with a thin oak overgrainer or overgrainer in tubes, using a stronger wash of the same graining color. A light varnish is advisable for this imitation.

Silver Wood imitation is a variety that has also been, at times, much in request as a finish for bedroom furniture. In “genus” and “order” silver wood is really related to the sycamore and maple, and when graining it many experienced workers rather exaggerate the blue-grey tone which is usual to the real wood. Since woods that possess a general cool tone are very uncommon, this slight forcing of its blue color may at times be a pardonable matter, but when used in combination with red woods, for imitation inlays, its natural greyness only should be aimed at.

The ground for silver wood should be quite white, prepared from white lead or zinc white. If, as is usually the case, the imitation be worked upon oil-paint ground, it is as well to slightly neutralize the yellowness of the linseed oil by adding a touch of blue-black. The graining color is a weak beer wash, stained with blue-black and indigo blue (finely ground in water). This being spread, the silvery mottle is worked with a camel hair mottler in straight sharp lines across the panel, making some portions plainer, as with maple. If the work permits, we at once proceed to wipe out the clear reflected lights from amongst the previous mottling, this being done with, preferably, an old, or “burnt edge,” camel hair mottler. Should the panel

dry too quickly over the mottling process, we may leave it until, by wetting over again with clean water, we are able to obtain the desired effect. To finish the imitation, we now put in a fine straight overgrain, crossing the mottling at right angles, and after the growth of the plainer treatments of maple. A thin wash of Vandykè brown, used so that the overgrain is just perceptible, will bring out the full value of our cool tones, and whilst softening the form of the mottle will give the faint warm hue which is found in this variety of real sycamore. Softening and stippling with the badger will further be advisable, as in all water graining. It need scarcely be added that the purest of white varnish should be used for silver wood. For furniture, much of this work is done upon distemper-prepared grounds, as explained in an earlier paper, and for finishing which a white *spirit varnish* is used.

Tulip Wood imitation is an ornamental variety, very useful for painted inlays, being of a rich red color, and having an uncommon appearance of grain. The tree which is popularly so styled is seldom seen growing to any size in this country, and rarely elsewhere than in gardens. The mature growth of a hundred feet is, however, common to it in its natural climes of North America. Although used both by cabinet makers and coach builders, it is seldom worked in any size for furniture. Its imitation for inlay work may easily be obtained upon a light yellowish-red ground by spreading a thin coat of mahogany lake and a little Vandyke thereon. This is slightly stippled, and then the cross lines of darker reds are painted in with an overgrainer or pencil, according to size of surface, using the lake and burnt sienna to the desired tone. When used for inlay the stripes are shown cross-ways of the line or ornament.

Amboyne Wood is the name of a richly colored variety, so called from the place it is imported from—viz., the Island of Amboyne, of the Moluccas. Its chief characteristics are masses of small knots, somewhat similar to the clusters found in our native pollarded oak, the color, however, being brighter and more gairish. As this is seldom used in mass, but only for small surfaces or inlays, imitations of very small knot-clusters of oak will usually suffice. For graining, the ground may be similar to that for tulip wood, or rather more yellow. The knots are put in with a round fitch and pencil, using burnt sienna and burnt umber, or Vandyke and sienna; and the final glaze, after binding down, may be done with varying tones of red and brown.

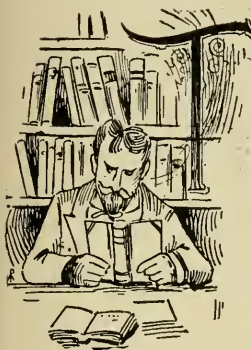
New Zealand Oak—or Yew, as it is sometimes termed—is a wood very similar to Amboyne, so far as growth and grain goes, but without any of the redness of the latter. In large surfaces we find the masses of knots surrounded by very pleasing surfaces of a plainer nature, wherein are fine grain and soft mottle—in fact, all the features of English pollard oak upon less regular lines. The best color for imitating this is burnt Turkey umber, with Vandyke brown for warmer parts and for the glaze and overgrain.

Purple Wood is the name given to a very deep red variety. As it is used chiefly for fine lines and in minute pieces, its color opacity or positiveness, is the main quality. It is usually worked in soft veins and markings of mahogany lake, ivory black, and Vandyke upon a very deep red. In the cheaper imitations of inlay upon light furniture Indian red pigment alone is used.

Black, for painted imitations and inlaying of ebony, may be either lamp-black well rubbed up with old beer, or ivory black, which can usually be obtained finely ground in turps. This latter should be put on blotting paper to draw out the turps, and may then be readily mixed with beer. For line work and fine ornament the purest neutral black must be used; and the simple plan described above is much to be preferred to that of imperfectly rubbing up the dry drop black.

CHAPTER XIII.

IMITATIONS OF INLAID WOODS.



THE art of *inlaying*—a word that explains itself—has been practiced to some extent for many centuries. Mosaic, perhaps the most ancient, marquetry and parquetry, and the inlaying of metals, are all four different methods of working out the same idea of ornamentation. With the metals and mineral products we have here no concern, whilst the connection of these papers with marquetry work—the inlaying of furniture—and parquetry—its application to floors—can only be of a somewhat remote nature. A general *resume* of these inlaying arts would doubtless

serve as the best introduction to studying their painted imitations—since both painted mosaic and metal inlays are as practically useful in decoration as those of woods—but for the present the student must look for this in other directions. All I can attempt to do in the space of two chapters is to explain how, in connection with these lessons on graining, the technical processes of painting, graining, outlining, staining, etc., are so manipulated as to obtain the desired imitations of inlaid woodwork.

Suitable Designs for Inlaying are factors in this work upon which much of the resultant success will depend. The production of good ornamental design—that which is original—can seldom be forthcoming without the combined resources of a natural inventive faculty and a trained eye and hand. Very few grainers lay claim to being also ornamental designers, and fewer still can justify that claim. Perhaps the next best thing to being able to create an ornament is to know when a design is suitable for any particular purpose. This knowledge should be possessed by the imitator of woods in its application to inlaid work. Without, therefore, presuming to initiate my practical readers into mythical principles of idealistic lines and contours upon which, presumably, ornamental forms are produced, I will indicate simply how, and why so, a design for inlaying should be arranged.

The ornament, in the first place, should be of the nature termed flat, and therefor akin to that for stenciling. The basis of the idea, that of lay-

ing in one wood upon another, resents any attempt at shadow or rounding, whilst the first principle of construction—viz., utility—is outraged if we attempt light and shade upon surfaces like table tops and the floors we walk

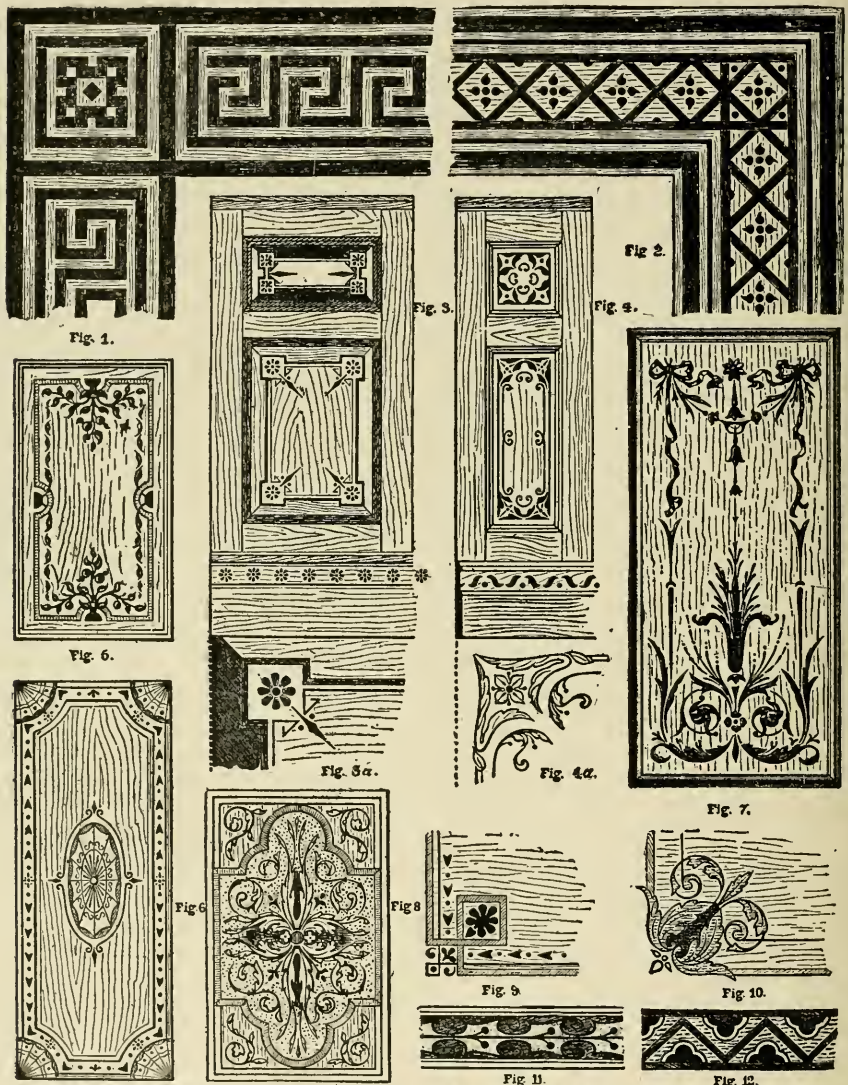


Fig. 1.—Suggestion for Floor Margin in Old "Key" Pattern. Fig. 2.—Another Suggestion for Floor Margin. Figs. 3, 4.—Treatments for Panelling in Imitations of Inlaid Work. Figs. 3a, 4a.—Corners of Larger Panels in Figs. 3, 4, enlarged. Fig. 5.—Panel Treatments in Walnut and Ebony on Light Wood for Dining-Room. Fig. 7.—Ditto for Drawing-Room. Figs. 6, 8.—Fancy Panels—Light Woods on Dark. Figs. 9, 10.—Corners for Panels. Figs. 11, 12.—Simple Borders in Imitation Inlaid Work.

upon, whether it be in mosaic work or parquetry. *Color* in inlaid work has certainly some purpose and mission, but form is of chief importance, and therefore very careful and accurate drawing is required. Contrast of light against dark, and not color-contrast—a distinction with a difference—is the

means whereby the ornamental form is displayed. In the more elaborate specimens of marquetry, conventional representations of material forms and figures are, however, sometimes executed. Outlining with light wood or black is then resorted to, that the design may be properly defined; and, in such cases, the color-stained woods are used to give a soft richness and to help make a picture. The margin between that *correct art*, which ornaments the constructive and useful, and the *bad art*, which sacrifices all sense of use and first purpose to ornamentation, is here but a very narrow boundary line. The colored inlays of the Italian mediæval work and the costly "Buhl" work of French production are usually free from any such reproach, since in these productions we find the same excellence attained as in the best Persian painted decoration, where light and shade is *suggested* to perfection, but never directly *represented*.

In the imitation of inlays a learner's best effects are commonly obtained by graining woods in their natural colors, leaving the polychromatic arrangements for the perfected skill of experienced workers. His scope is by no means limited thereby, as a glance at the woods mentioned in the preceding paper will prove. Two or three well-arranged varieties, worked into a good design, give but little trouble, and amply repay the time and labor involved.

We will now interest ourselves with simple methods and treatments, chiefly in their connection with and applicability to the woodwork of buildings, leaving to the final paper the execution of more difficult and intricate panels and table tops.

The *Grounds for Imitation Inlays* should invariably be light in color. A perfectly level surface must be maintained, and it is by this desideratum our methods are governed. It is quite apparent to anyone possessing only a slight knowledge of painting that an opaque white ornament cannot be obtained against a dark background without the former being coated so many times as to destroy the even surface. On the other hand, it is possible to cover up portions of a light ground, even to blackness, without any appreciable thickness of pigment, hence the reason for light grounds. When white unpainted wood is the ground worked upon, for simple inlays we may prepare the surface with a coat of varnish, and thenceforward treat as a painted ground. For delicate work, however, in which we desire to stain the wood itself, a totally different plan is advisable; this we will consider later on.

Inlaid Floor Margins have occasionally provided work for the grainer for many weeks in the "good old days." Although the real parquetry is now so cheap that its imitations may seldom furnish employment for the operative, this branch may well be followed by the amateur worker. Many persons now use a margin of imitation parquet linoleum, in place of the plain staining of floor boards, but there is little doubt that a stained ornamental border would be generally preferred to either.

Fig. 1 is intended for two woods only—dark walnut upon a light

oak. Fig. 2 is made more ornate and effective by the further addition of ebony wood imitation. To apply these designs we first make a full size line drawing of the border, and from that make a tracing upon a piece of cartridge-paper. This is easily done by rubbing over the back of the outline drawing with a little dry red or black lead, then pinning the two together upon a table with drawing-pins and marking over the drawing with a fine-pointed stick or pen-holder. The color is thereby pressed into the face of the cartridge-paper. We make a tracing upon cartridge-paper for each different wood used—hence two for border Fig. 2 and then cut out the parts of the design corresponding to the wood. When the design is of one color only, one stencil is sufficient; but it may be necessary to make good the ties by hand afterwards, in which case it takes as long as working two stencils. The floor must be well cleaned, and as smooth and level as we are able to get it. It is advisable to strike two or three chalk lines; marking the center and extremes of the border to which we work the stencil. The corners are best set out separately and put in by hand, unless of an intricate nature, when it will be quickest to use stencils. A coat of hard-drying oak varnish, stained with raw sienna in oil and a little raw umber, is first spread over the whole margin to get the oak color and prepare the wood also. The border being set out when this is dry, we first stencil in the walnut, using burnt umber with the same varnish, and then lampblack with varnish for the ebony. The first varnish coating enables us to stencil these cleanly, and the marginal lines are put in last with a fitch and straight edge. A coat of hard-drying varnish all over, and then rubbing with beeswax and turps, will make a good and durable finish.

Plain Panelled Dados and Wainscot are woodwork of a higher order of construction, and with such as these simple inlays may be admirably worked. For chapels or school-rooms wherein are large quantities to be treated, our ornament must be both suitable and easily executed. I therefore show two suggestions of design (Figs. 3 and 4), in both of which a black outline may be pencilled on with beer and lampblack after the stencils are used, or the design may be all black. The preparatory coating of varnish is here also advised, and the ornament executed upon the same plan as for the floor borders. These, I am well aware, may be but "bastard" imitation inlays. It would, however, be worse than useless to attempt the same expensive method for cheap panelling as we should use upon a table top. Stencils, if specially designed and cleanly cut and used, will bear all reasonable inspection, and if time can be spared to paint the fine black outline by hand, there will be no perceptible thickness to mitigate against the desired inlay effect.

Simple Inlay Designs for Grained Doors will now be within the scope of learners who have worked at the previous easier treatments. These samples (Figs. 5—8) are intended to be worked in two varieties of wood upon a third. Figs. 5—7 may be used upon maple graining with mahogany or wal-

nut ornament, and black for fine detail and lines. Figs. 6 and 8 are upon walnut ground, with ornament in maple, grey hair-wood, and amboyna. Besides these complete panels, which will enable the worker to judge the effect of a finished panel, I give in Figs. 9 and 10 some very easy corner ornaments, which make up neat and pleasing panels by using them in the corners and joining with fine lines. Figs. 11 and 12 represent simple scroll borders, useful either for panels or the flat member of a door architrave.

A zealous student with a little knowledge of drawing will very soon augment this little selection of ornaments. We are surrounded at all times, in the streets of the city and at the fireside, with different ornamental forms and expressions. A faculty for adapting lineal forms to the special requirements of our work is the essence of that which is commonly termed designing; for the beauty and perfection of an ornament is not judged solely by its lines of grace or intricacy, but rather by its fitness for the position it occupies and exigencies of the material we work in. It is, therefore, indubitably apparent that the man who executes the inlay should make a better design than the draftsman who is ignorant of the practical work and technique.

Methods of executing Grained Inlays may now be explained. Since one general system of working will apply to all my panel illustrations, I will take Figs. 7 and 8 and show how to grain them upon painted grounds.

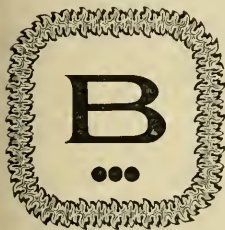
For both panels we "get up" the surface and ground them for maple imitation. Our first sample being darker woods upon maple background, we proceed to imitate the latter wood—with distemper color as previously described—all over the panel. As we are to enrich this panel by ornament, we purposely keep the maple figure very subdued and finish it entirely before we varnish. The panel being now ready for the other woods, we have first to make a careful drawing of the ornamental outline and prick this through at very close intervals. For small work a sheet of thin note-paper answers admirably. Having now our pounced drawing, we also make a little muslin bag of cheap dry ultramarine, or any similar finely ground pigment, for conveying our design to the panel. Before this is required we take our distemper colors, Vandyke brown, etc., and a little beer, and grain over the corners of the panel or wherever the walnut portions of the design come. This can be roughly judged by the eye alone, or if much walnut is wanted we grain the whole panel. We have now to secure those parts of the walnut we want for the design and to remove the superfluity. This end we attain by painting the design with a vehicle of any nature which we can afterwards remove by a solvent and brush, and such as water will not effect. For this purpose a little finest Brunswick black will answer best with painted inlays. We, therefore—the walnut being dry—now pounce the design thereon, and then carefully paint the walnut portions in with a sable pencil and the black. The latter dries quickly, and the superfluous walnut is then cleaned off the maple with a soft sponge and warm water. We have now the black, or ebony, to execute. We take a little black pigment—lamp-

black will do, but far preferably ivory black (see preceding paper) and this being ground to the finest quality is rubbed upon the palette with a little beer only. We now take a soft camel hair brush or the mottler, and brush over those parts of the the panel where black is required. If the distemper black is spread carefully a very thin coating will cover. When this is dry we again pounce in the design. If we use fine drawing paper and drawing-pins we may easily fix the pounce correctly by pinning into the first set of holes. We now cover the black parts with the Brunswick black, and when dry clean off the superfluity of distemper color with water. All again being thoroughly dry we carefully damp over the Brunswick with clean, pure oil of turpentine, and after a little time we are enabled to remove it all with a soft camel-hair tool, leaving the walnut and ebony ornament, sharp and clean, upon the maple panel.

With panel Fig. 8, upon walnut ground, we adopt the same expedient. First we make the grey hair-wood, pounce and black it in, clean the panel, and then grain maple all over or where wanted only, just as we please, but keeping the figure very faint, since walnut will cover most of it. We paint in the maple parts with Brunswick as before, and then, without cleaning off, since amboyna is a stronger colored variety, grain our amboyna parts. This being bound down where permanently required, we take our beer colors and overgrainers and grain the panel walnut all over. When thoroughly dry, we take the turpentine solvent and soak off and remove the Brunswick black, leaving the ornament in maple, hair-wood, and amboyna against the walnut background. The panel is now ready for two coats of copal varnish, the lightest and best quality of which is desirable.

CHAPTER XIV.

PAINTED IMITATIONS OF MARQUETRY—FURTHER METHODS OF EXECUTING GRAINED AND STAINED INLAYS, WITH SUGGESTIONS FOR THEIR PRACTICAL USE.



BEFORE considering separately the different treatments connected with the accompanying illustrations, it may be advisable for a brief space to gather up the "threads" of the preceding paper, so far as their bearing upon this lesson is of present importance. In the former article I explained the processes usually adopted when simple combinations of woods are

worked; whilst I endeavored, by an illustration of ornamental effects, to secure the student's practical interest in this pleasing branch of decorative graining. Although arrangements of several different varieties of woods were therein explained, both of light upon dark, and *vice versa*, the principle of working whereby portions of a surface are temporarily protected—technically called "bound down," or "stopped out"—was, however, but briefly analyzed. This point of interest and importance, as also that relating to color-contrast between the component divisions of a design, will now profitably engage a little more attention.

The "*Stopping out*" Process is the means to an end which, in its application to inlay imitations, rather puzzles the learner. He can usually discover how a dark ornament can be bound down upon a light ground, by simply stencilling the pattern over the walnut distemper graining with a thin coating of transparent varnish or gold size, and then cleaning off the remaining part with water; but to get the pattern light upon a dark wood, is altogether beyond his ken. The first point is to understand that the ground color for the *lightest* variety of wood to be imitated must necessarily be the ground color of them *all*, since any attempt to paint in the various creams, buffs, reds, etc., required for graining large surfaces would at once make the desired finished appearance of inlay a virtual impossibility. The next stage of enlightenment is reached when the student fully grasps the difference between graining the varieties in *oil* and in *water*. If we figure, in oil color, a surface in light oak, and then, when dry, work over it an

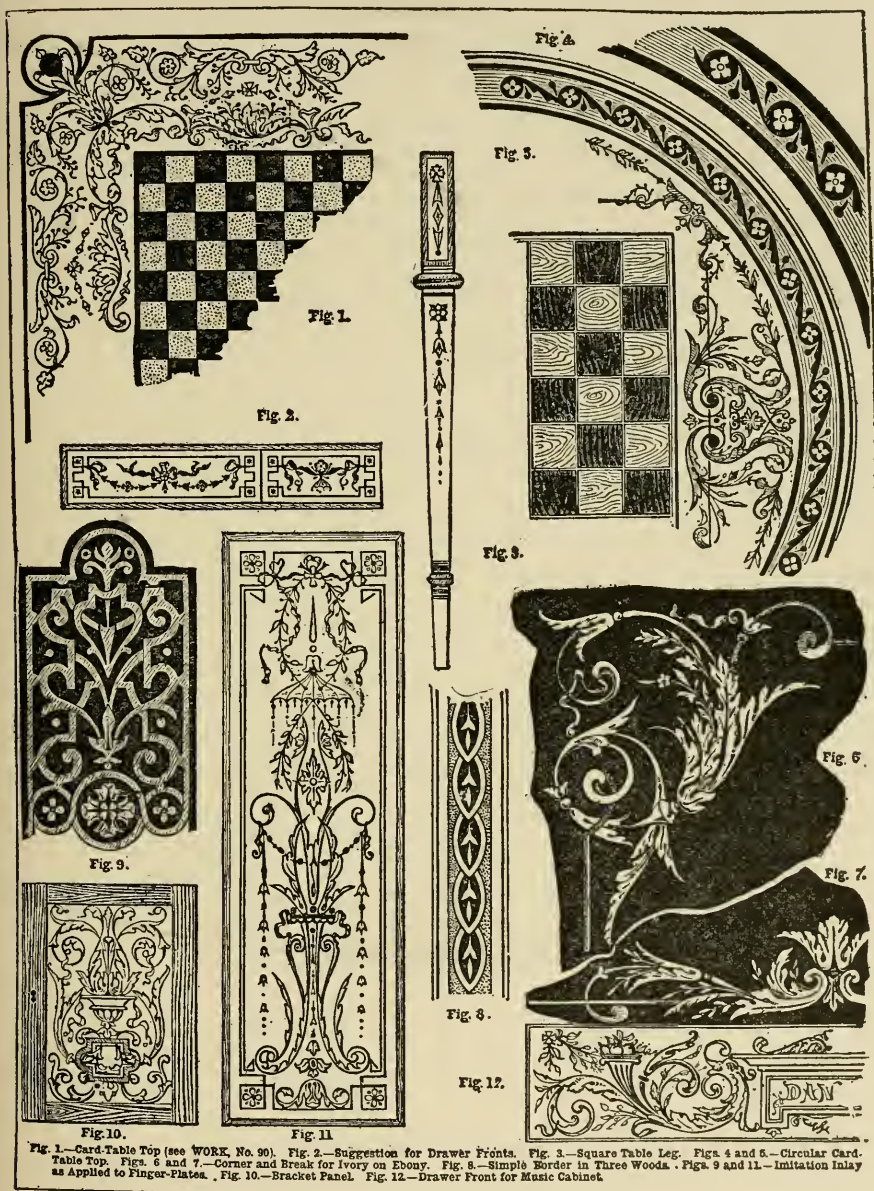
imitation of knotted oak, also by the oil process, with the notion of subsequently removing some parts of the latter, we should attempt a difficult task. Assuming that we could preserve the design by stopping it out with some vehicle, we should, in trying to remove the surrounding parts, have to use a solvent (turpentine), which would at once loosen also the light oak beneath. Hence, by using water colors, we are enabled to clean off the surface with water only; whilst the stopping-out varnish covering the portion to be ultimately displayed is not in the least affected at that stage. This principle is not at all an uncommon one in decorative and kindred practices. With glass embossing, for instance, we paint over—i. e., “stop out”—that portion of the surface into which the acid is not required to eat. When the latter has done its work, we find that the Brunswick black is not affected by the acid, although by the use of turpentine we can readily clean the black off the glass, now that its purpose has been served. Other examples might be noted, but doubtless enough has been written thereon for the least experienced of my readers.

“*Stopping*” *Varnishes* of several different natures may be used, and the solvents for their subsequent removal must naturally be of kindred variety. Simple wood naphtha varnish will answer the purpose, and can be cleaned off with the same spirit. An ordinary shellac varnish of the “white hard” kind will, of course, require alcohol for its removal; whilst any painter’s vehicle into which turpentine largely enters, will also answer the purpose. Those which I can confidently advise the learner to use are white lac varnish for staining inlays upon real wood surface, and the finest Brunswick black for working upon oil-painted grounds. Canada balsam may be used for the more delicate and intricate of painted designs, but the above black varnish is as reliable for this work as it is for embossing. Turpentine, the solvent for the two varnishes last mentioned, is far less liable to damage a painted surface than the more “fiery” spirit solvents; hence their better suitability.

In manipulating the solvents some care and patience are necessary to remove the varnish. The former should be well flooded over the design, and the soft camel’s hair “dabber”—such as gilders and polishers use—should be employed, more for mopping up the solvent than for rubbing the varnish. If the spirit or turpentine is allowed to thoroughly loosen the varnish, no great difficulty will be experienced in removing it; but if much pressure and friction be used, the water-graining—held together only by the glutinous nature of the beer-fluid—will probably be loosened also. Before executing any permanent ornamental work, the novice should well practice this operation, and also aim to temper his varnishes with a little turpentine or white polish, respectively, in order to use them only of that strength necessary to protect the graining, and be the least trouble to clean off.

Color-Combinations and Harmonious Contrasts of the Various Woods contained in any design is a branch of the subject requiring special study. One

of the best sources of knowledge thereon is, naturally, the real marquetry work of a good make. If, added to this eye-training, the student will fix in his mind the few subjoined color notes, the artistic effect of his completed



effort will be worthy his best executive labor. Although in painted imitation inlays the decorative effect should be almost wholly the result of ornamental lines and form, as brought out by contrast of shade—light against

dark—we find that *stained* imitations of marquetry upon a plain wood surface give more legitimate scope for harmonious color-effect. A large portion of real inlaid work is of the latter kind, in which the ornament consists of dyed woods of various light tints let into a dark surface of richly-colored wood. Even in combinations of grained woods, however, a slight knowledge of color will enable us to get an enhanced effect without sacrificing the naturalness of the grain imitation:—*Complementary colors* are those which heighten the effect of each other by contrast when juxtaposed. True complementaries are such that balance each other, and which, if their colors be united, combine to reproduce white light. Sensations of color which in their entirety are equivalent to white light are usually conceded to be *harmonious* combinations—that is to say, agreeable and pleasing to the educated mind of humanity. From this it follows that complementary colors are the basis of harmonious or correct color-effects. Now, according to our modern theories and experiments, the complementary of a pure blue is a pure yellow, the complementary of pure red is a decidedly greenish-blue; whilst orange and blue (of an aerial hue), and lemon yellow with its complementary violet, are the other chief pairs of opposing and balancing contrasts.

In applying these principles to our work we have therefore a scientific basis to build upon. We thus know that a yellow or golden color wood will best harmonize with blue tints. Suppose we have, not a pure blue tint, but a violet or warm blue; the yellow, in such an instance, must also be modified by the addition of a little blue, making a greenish or chrome yellow. So also with red and its complementary; for if a purple-red (that is, with a little blue added), then must the complementary be made greener. In short, that combination of pairs which we make “warmer” on the one side, must be “cooled” on the other; hence orange warmed or reddened to a vermilion red must be contrasted by a complementary nearer to that of pure red than of yellow—viz., a greenish-blue.

When inlaying for color-effect upon rosewood, this being a dark purple-red, the foregoing teaches us that greenish-yellow tints are most harmonious. Also we learn that amboyna (orange) hues are heightened by contrast with an “aerial” (or slightly green-hued) blue. Beyond this, it must be broadly laid down that combined shades and tints of the complementary colors can only be used in subordination to the inlay principle, and that the outline and form of ornament must be distinctive before all considerations of pure color.

Executing Stained Inlays is, to the writer’s mind, the most artistic outcome of a knowledge of imitating woods. Having so fully explained the method of “stopping out” in connection with painted imitations, there is no necessity to dwell upon its adaptation to working transparent stains. Any spirit or water stains, washes of grainer’s pigments, such as the siennas, Vandyke, indigo, aniline dyes, or “Judson’s” stains, may be used. The best white sycamore makes probably the most suitable ground to work upon,

and if, as is usually the case, we desire to retain some portions of its whiteness, it is best to give it, all over, two coats of parchment size. These white portions are stopped in, and the size then cleaned off with warm water; when dry, the lightest stains are washed in, covered with varnish, and so on, until the complete design is covered in. The background of design is now stained and put in, perhaps as rosewood or walnut, and the varnish or balsam dissolved away, leaving the work sharp and clean for French polishing.

When executing such as the above, there is a natural tendency of the stain to spread beyond the confines of its portion. To remedy this, we may give the wood a preparatory coat of strong clear size, which partly fills the pores of the wood. In this case, however, the wood is not so properly stained. A better treatment, although a more tedious job, is to maintain an imitation inlay margin, or fine line, to the ornament. This can be either pure black or the white, unstained color of the wood. If the white line is desired, we paint this in with a fine sable pencil and Canada balsam before we lay in the washes of stain, which latter are then easily worked into their respective places. If a black margin is desired, we coat the surface all over (using a camel's hair brush) with ivory-black and beer; when dry, paint in the outline with stopping varnish, and then clean all the black off with warm water. In both cases, it need hardly be said, the double coating of patent size must be temporarily used, and then removed after the outline is stopped in. Were this neglected, it would be impossible to entirely remove the superfluous black stain in the latter instance; whilst in the white outline the sizing prevents the varnish running, and enables a sharp, clean pencil-line to be made. Imitation ivory is inlaid upon ebony in this manner also.

The ivory ground is nicely got up and finished; the design is then stopped in, and the whole surface carefully coated with the beer-black. The solvent is finally very carefully applied over the design; and when the varnish is thus softened and removed, we have a solid white ivory ornament against ebony ground. The ornament may be hatched and finished by a very fine sable pencil, and fine black from the tube.

Turning now to the illustrations, Fig. 1 shows a suggestion for treating the familiar card table. The imitation inlaying of the checker-board in ebony and boxwood would provide good practice, and be more attractive than black and white paint. The ornament might be in light harmonious tints upon rosewood or walnut. Fig. 2 is a simple suggestion for treating drawer fronts and sides; whilst Fig. 3 could be applied to straight table-legs. Figs. 4 and 5 are for a circular card-table top—the squares in satinwood and rosewood; the ornament surrounding it in light tints upon dark; but the border would be more effective with the order reversed, dark against light. Figs. 6 and 7 are corner and break ornaments for cabinet panels of inlaid ivory on ebony. Fig. 8 is an effective border for three woods. Fig. 9 is a somewhat Elizabethan design applied to a finger-

plate. This and Fig. 11 are drawn about one-fourth full size. The former, in satinwood upon walnut or ebony, would make a nice finish on a grained door in satinwood or maple. Fig. 11 should be used on a dark door, and be executed in rosewood upon a light wood. Fig. 10 is an ornamental arrangement that could be easily adapted to the panels of a hanging bracket of similar proportion. Fig. 12 is an ornament for the fronts of a music cabinet; it would look well in either ivory or light harmonious tints upon walnut or rosewood of quiet grain.

All the treatments herein suggested can be modified or entirely rearranged to suit the individual worker. The fine lines should be either executed with a carriage liner or with a small artist's bevel-edged fitch. The designs require first careful drawing to the exact size, and then to be pounced or traced upon the ground. For good work, a thorough command of the pencil for outlining is absolutely necessary, since the least want of balance or symmetry in ornament of this Italian type would condemn the whole thing. The execution of these and much better designs should be possible to all who have followed my instructions; whilst any portion of the work requiring further explanation can be attended to in the invaluable columns of THE WESTERN PAINTER.

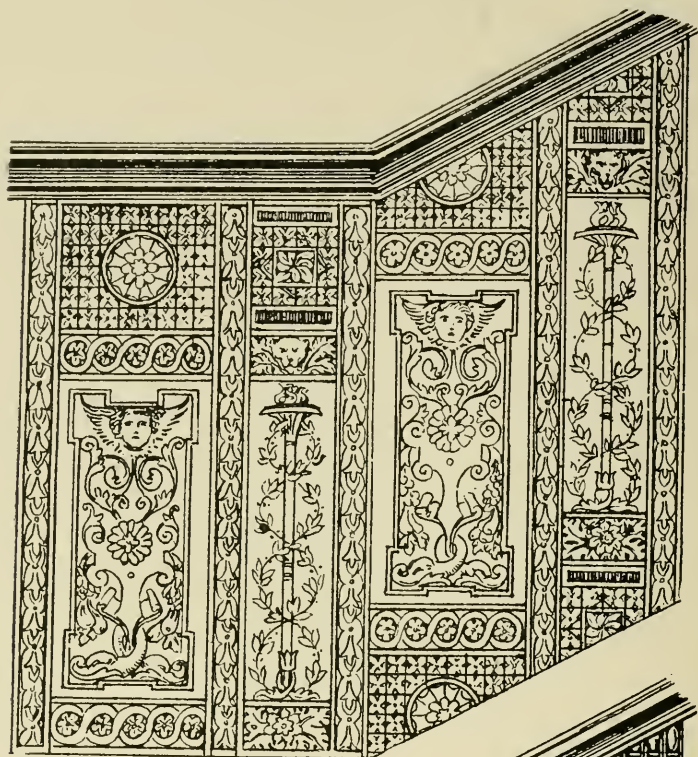
CHAPTER XV.

PRACTICAL METHODS OF GRAINING AND IMITATING WOODS, LEATHERS, METALS AND MAJOLICA FOR WALL AND CEILING DECORATIONS.

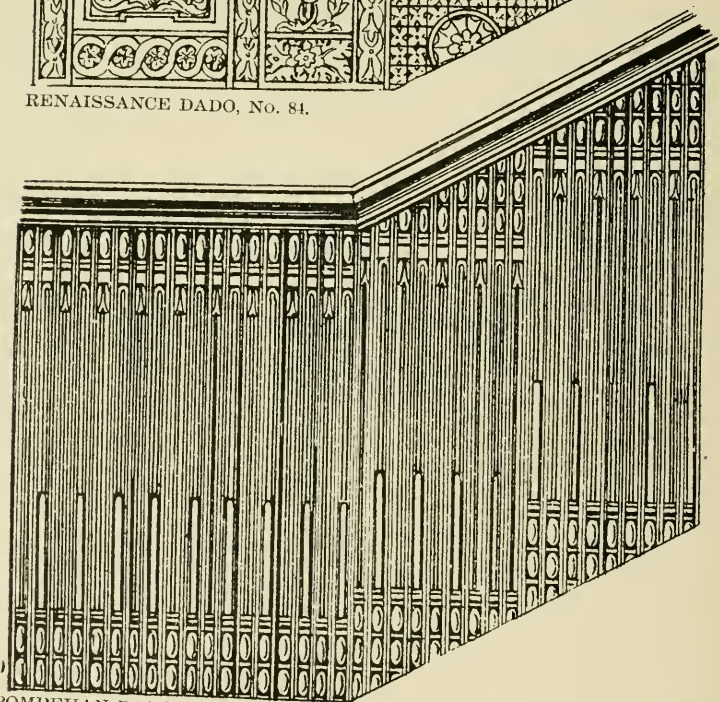


THE subject of this chapter is a distinct departure from the beaten track usually followed by writers on the imitative art of the grainer, hence a brief explanation may be acceptable to the reader. In the foregoing papers on practical graining, an effort has been made to provide the apprentice or young beginner with a careful and minute explanation of the whole technique and practice. That this much and more has been attained to by other able workers, I grant; but in most instances the initial cost of the book has been a drawback to a more popular study of graining by the young American painter. Although the value of my comparatively feeble black and white illustrations may be questioned by some experienced critics, their mission must not be misunderstood. Just as it is far easier to describe a circle by drawing one than to verbally explain its nature to the juvenile mind, so many of my little sketches will bridge over technical difficulties of explanation particular to unsympathetic "cold type." Moreover it will be readily granted by any experienced grainer that nature alone is the best copy and source of inspiration; and since all varieties of the woods already discussed are within reach of every zealous student, our illustrations need no further apology.

But it is not my desire to leave the subject of decorative imitations without devoting a little space to certain modern aspects of the work alike useful and interesting to the up-to-date house painter and decorator. Notwithstanding graining in its best and truest aspects is executed now-a-days upon lines almost identical with the methods of fifty, or even one hundred, years ago in Great Britain, all other kinds of decorative work have greatly changed. The wall paper manufacturer has long since ousted the painter from his interior wall painting and mural decorating; and now within the last ten years the inventive faculty of the age has been in overwhelming competition with the art of the wood carver and cabinet maker. So far, however, machinery has not succeeded in imitating the color and transparent woody effect of a carved oak panel. Substance, surface texture and even the markings of the gravers' tools are faithfully reproduced in our modern Lincrusta material, but if a ceiling or dado of this relief decoration is desired in any imitative effects of wood, leather, etc.,—then the painter and decorator must

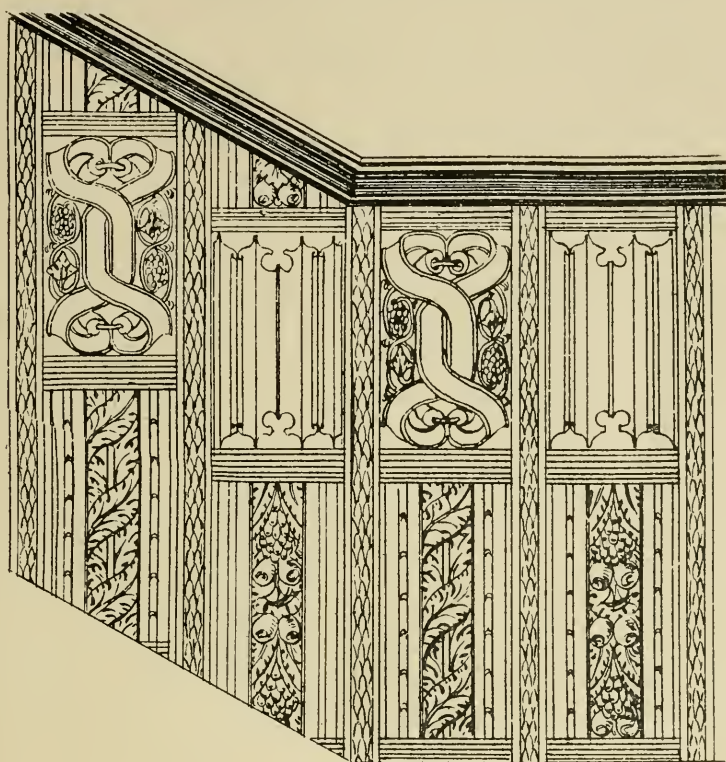


RENAISSANCE DADO, No. 84.

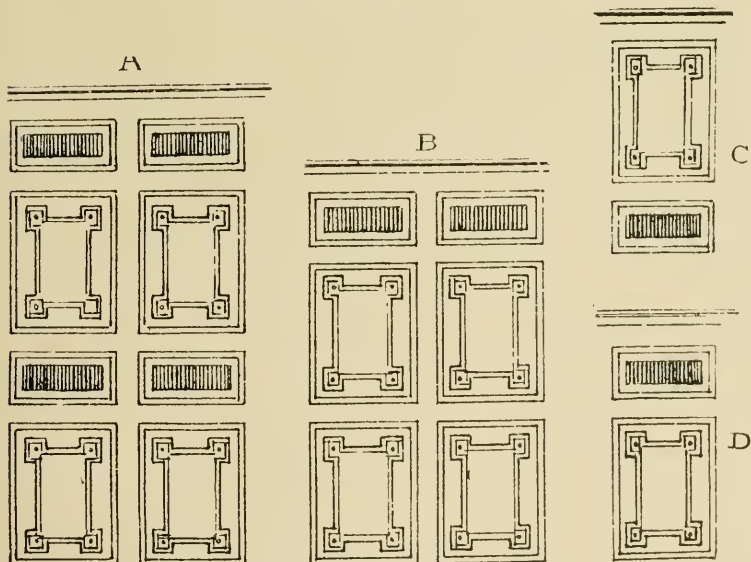


POMPEIAN DADO, No. 22.

ANAGLYPTA DECORATIONS—THE MODERN ASPECT OF WOOD IMITATIONS.



GOTHIC DADO, No. 138.



ADJUSTABLE PANEL DADO, No. 67.

ANAGLYPTA DECORATIONS — THE MODERN ASPECT OF WOOD IMITATIONS.

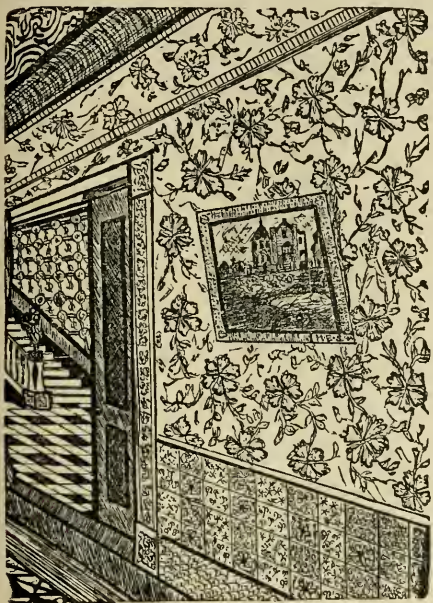
be called in. There is little probability of machinery doing this kind of decorative graining; although, in a succeeding paper, we shall gather some notions of the possibilities of some up-to-date mechanical graining aids and patents.

In compiling the accompanying illustrations I have selected those materials having a special relation to woody effects. Lincrusta and Anaglypta, both originally coming to the United States from the mother country, represent two distinctive kinds of material and surface. They are, moreover, extensively utilized as substitutes for hardwood decorations and many designs have been specially prepared and the rollers engraved in imitations of carved wood. Besides the two modern inventions above mentioned, there is "Lignomur," of domestic manufacture, and "Cordelova," coming from the land of "kilts and claymores," both of which have special and valuable features as imitative decorations. For the present the practical scope of the lesson will be best served if we confine ourselves to "Lincrusta" and "Anaglypta," both of which are now known and extensively used throughout this country.

First a few introductory notes concerning the nature and history of these products, which, although not appearing at first glance very germane to the subject, will be valuable as explaining the particular qualities of the materials for painting. Lincrusta is now nearly twenty years old, having been medaled at the Paris Exposition of 1878. Having been personally connected with some of the important buildings on which it was first used, one is tempted to draw a comparison between the original English product, "Linoleum Muralis," and the Lincrusta Walton manufactured today by F. Beck Co., of New York. But space will scarcely allow this. Briefly: "Lincrusta Walton" as now made was the patent of one Frederick Walton, the managing director of a very large firm of "Linoleum," or floor cloth, manufacturers. Handling so much Linoleum, Mr. Walton became impressed with its qualities of durability and tenacity, and its possible use for covering walls suggested itself to him.

The drying property or oxidization of linseed oil is now generally understood by every practical painter. This same principle has much to do with Lincrusta, since the inventor described it as "a composition of oxidized linseed oil and fibre." In the form of a paste it is rolled upon a backing, originally of thin muslin but now of stout waterproof paper; it then passes between engraved metal rollers into which latter the design has been cut. In finished appearance Lincrusta excels for sharpness and cleanness any other solid relief work that we know of; whilst the raw materials from which it is produced speak plainly, to the painter, of all men, that the product is waterproof, elastic and pliable. Like paint, it hardens with age, but even when new the surface is quite non-absorbent. The native colors of Lincrusta is a very important item to the decorator, and although it is now made in Britain in various fancy "art tints," the American stock color is the most useful way.

"Anaglypta," the second relief material from which my illustrations are drawn, is a much later invention. Moreover, it differs entirely in nature from "Lincrusta" and hence the preparatory work for imitative treatment



LIGNOMUR DECORATIONS.

Wall treatments in imitations of "old blue," majolica, tile dado, and filling of "old cinnamon" leather.

must be governed thereby. I suppose its manufacture is one of the most interesting processes connected with the decorative trades; since at one end of the machine we see the liquid pulp, made from pure white linen rags, and at the other out comes the beautifully engraved Anaglypta rolls. From the machine it passes continuously up a hot air chamber to the top of the factory and then through a sizing machine which brushes on and also stipples the size. In briefly reviewing the process of manufacture, its main decorative features are thereby indicated, viz., the whiteness of the product and its practically non-absorbent surface.

Lignomur and Cordelova both have affinity with Anaglypta so far as native color is concerned; but in neither case have they the non-absorbent quality of Anaglypta and hence require slightly more preparatory treatment.

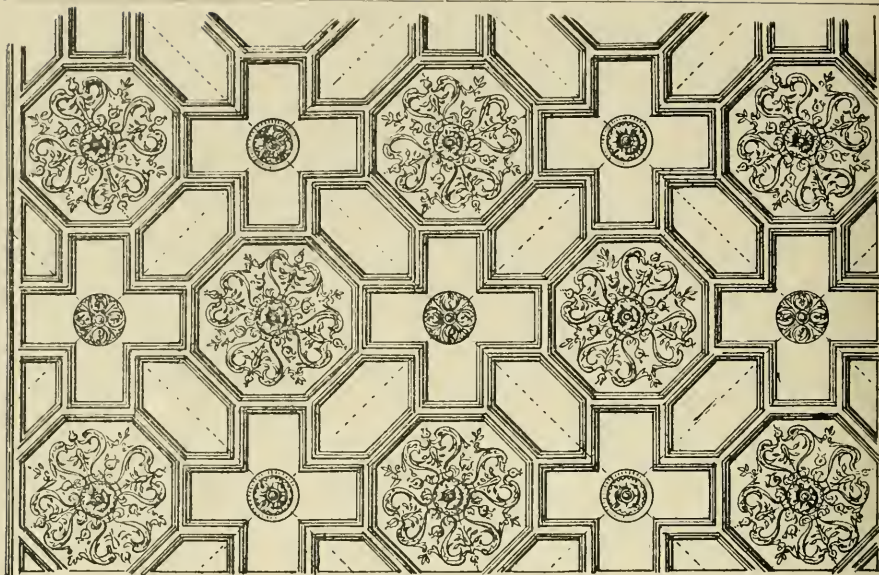
Apart from this, all these four inventions herein enumerated have each admirable and individual qualities and characteristics, as modern decorations.

The connection of relief decorations with the graining of woods and other imitative effects will be apparent by a glance at the respective manufacturers' illustrated catalogues. We have in these materials dado designs in many kinds and styles of art; ceiling decorations, both low and high in relief, even to imitating the wooden panel mouldings; and carved figure and genre panels without limit. Those enlightened persons to whom the grainer's work is a miserable sham and an abomination have in these materials, which not only imitate the carver's art but the substance of the wood carved, with its grain and pores, a greater subject on which to pour out their vials of wrath. But, aside from this controversy, which I purpose considering in another paper, these beautiful machine made decorations have come to stay. Every year they are increasing in use and merit, and there-

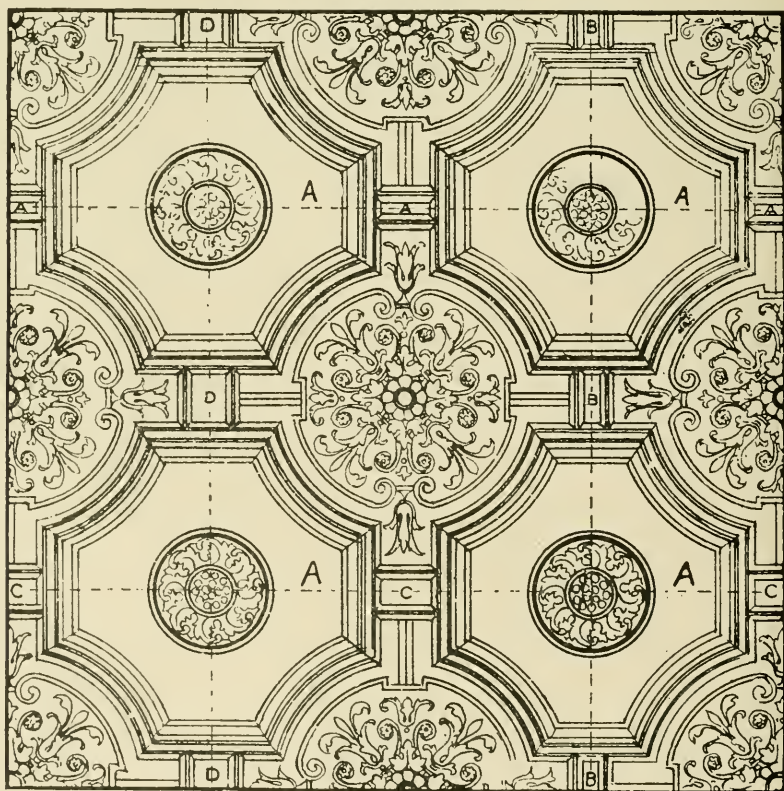


LIGNOMUR, No. 7.

Used for dados, ceilings, etc., in wood and majolica effects.

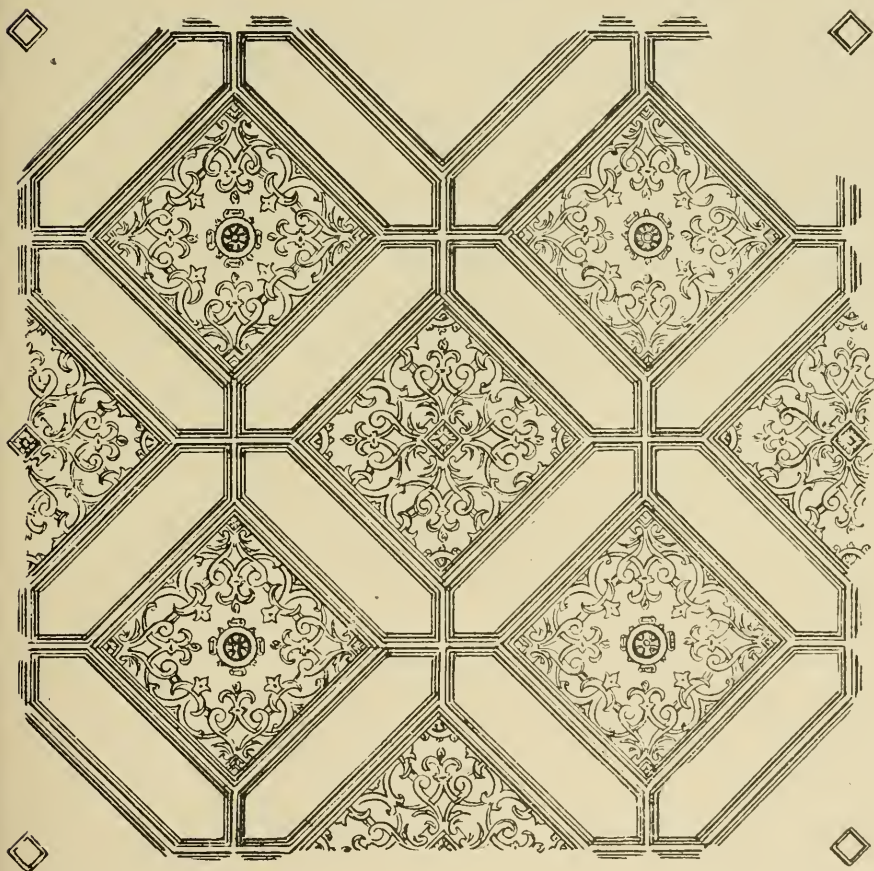
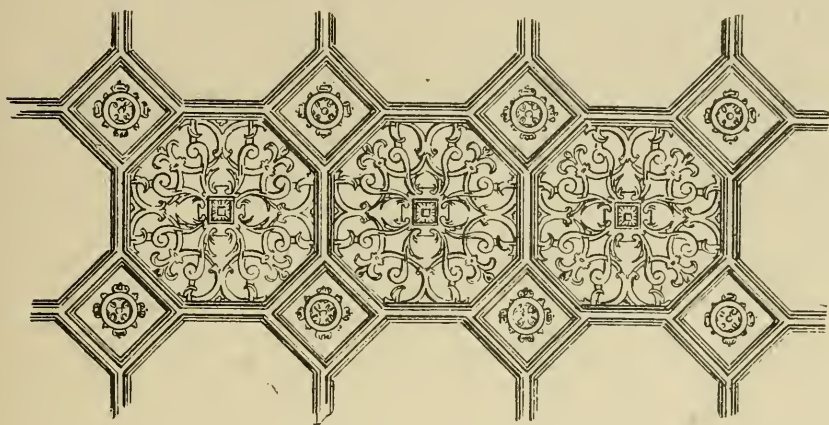


ITALIAN CEILING, No. 164.



OLD ENGLISH OAK CEILING, No. 121.

MODERN ANAGLPTA CEILINGS IN LIGHT OAK AND LEATHER EFFECTS.

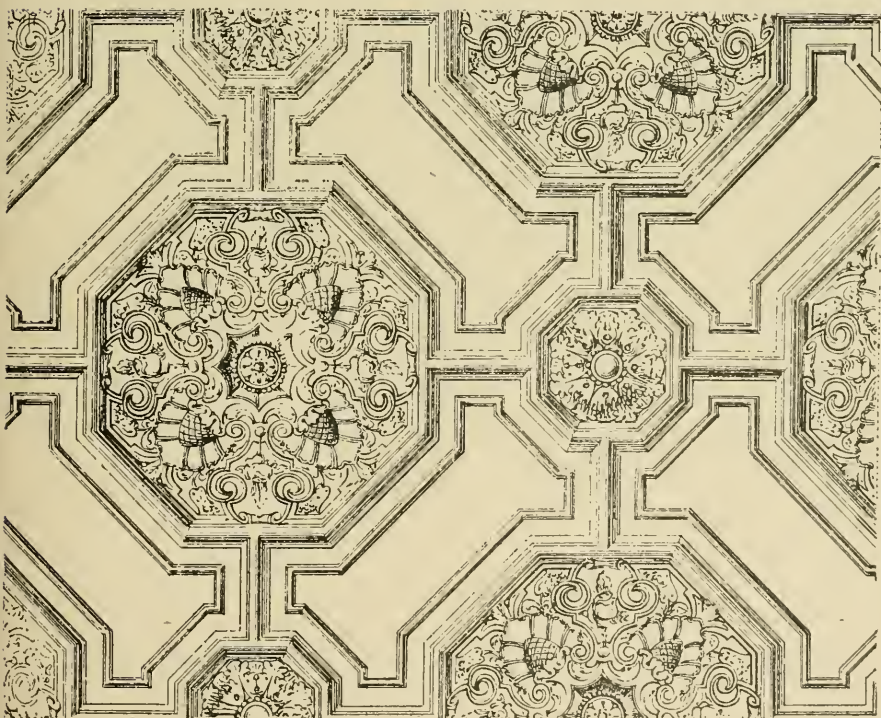
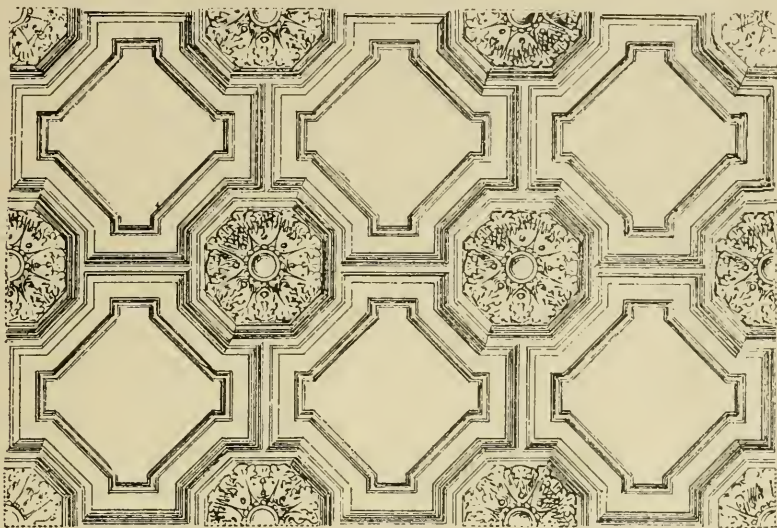


ANAGLYPTA DECORATIONS — AN ELIZABETHAN CEILING FOR WOOD, METAL AND OLD PLASTER IMITATIONS. NO. 165.

fore it behooves the grainer as well as the painter to be prepared to deal economically and artistically with his surfaces.

It may be suggested that any painter who is a master of the "art of graining" and all the technicalities discussed in the preceding chapters will find little if any need of this special essay. Such would prove a very erroneous assumption; for although having studied for years and practically worked at all the graining methods herein described, my visit to the Anaglypta factory in the north of England a few seasons back proved a very profitable experience. When I add to this that many of the most costly and artistic interiors I have inspected of the modern and up-to-date kind were associated with effects in woods, leathers, etc., the present commercial importance of this work is apparent.

Wood effects in Lincrusta can be obtained at a comparatively small outlay—providing one goes the right way to work. I would first impress upon the mind of the practical reader the great importance of *natural* color, of general and mass color effect; and then the necessity of all imitative figure or veining being very subservient, if not entirely omitted. For instance, what would be the result if we were to treat a carved panel or dadoing in imitation of Savannah pine? Why, simply hideous! The lines of the veins would break up and clash with the relief ornament and would utterly destroy its effect—since color contrast is more emphatic than shade contrast. Of course, this is an extreme example; but a grainer is more likely to have a weakness for figure than an ordinary painter, and in such work he must operate with great reserve. I remember seeing in a large London hotel a dado design of diaper Lincrusta which was quite spoiled by the finish—"decoration" miscalled. The idea was for carved rosewood, and the black veins played havoc with the ornament, whilst it was finally left in high gloss varnish just the same as the grained woodwork of the room. This was the work of a first-class grainer too! But to return to Lincrusta: I have samples of excellent carved oaks, both light and "antique," which were worked directly upon the material. The Lincrusta itself gave an excellent ground; the work was oil glazed with raw or burnt umber only, then stippled coarsely and wiped, *en masse*, down the face of the enrichment. These panels were then flat or wax varnished and finally washed over with dry umber and a little fuller's earth for light oak, and black for the "antique," mixed with 50% each of beer and water. When just drying off, they were again wiped off with a damp wash-leather which leaves the water "scumble," or overgrain, in the recessed parts of the ornament and gives an antique and softened appearance. By this method I have used the renaissance Anaglypta dado No. 84 (the line drawing of which can convey but a poor idea of its beauty) in a dining-room, so that it was impossible to see any difference between the imitation dado and a costly and carved overmantel of antique oak. Beyond this the dado was entirely done by an intelligent apprentice, who only had to have his colors mixed. Lincrusta undoubtedly scores for



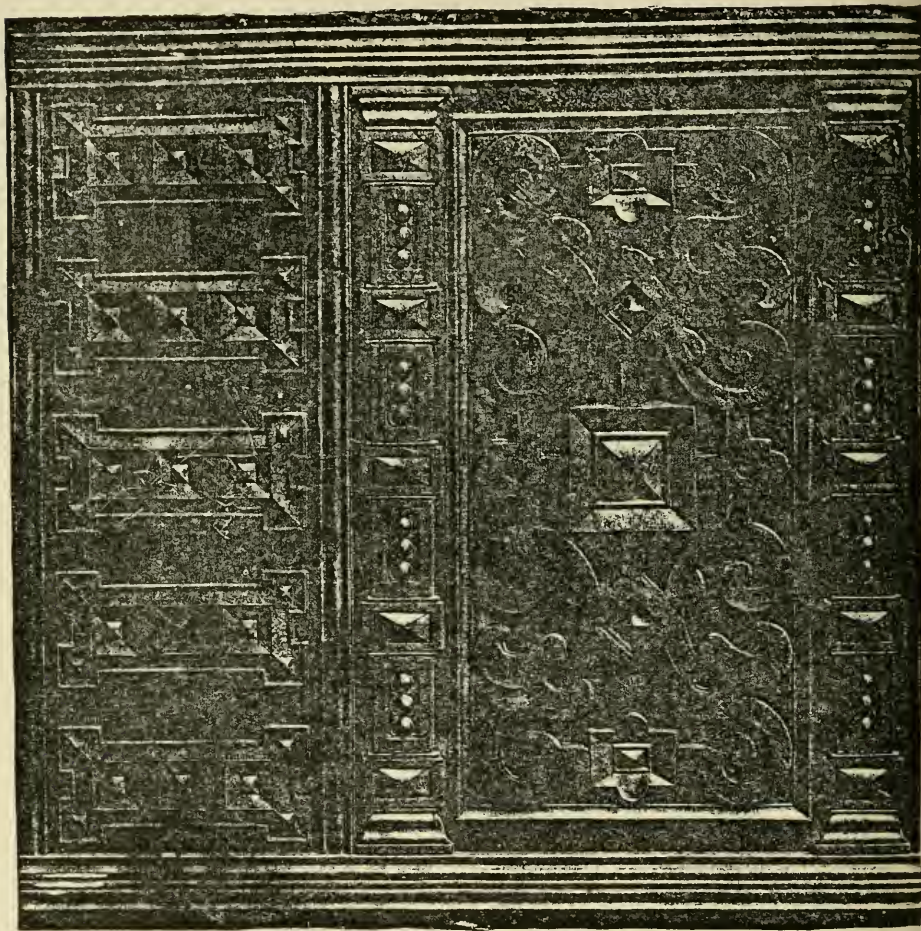
ANAGLYPTA DECORATIONS—A RENAISSANCE CEILING IN IMITATIVE WOODS.

No. 1071.

DADO.

Pattern—CARVED WOOD.

Style—GERMAN RENAISSANCE



SCALE 1-4 ORIGINAL SIZE.

PATENTED.

LINCRUSTA IMITATIONS FOR GRAINING EFFECTS

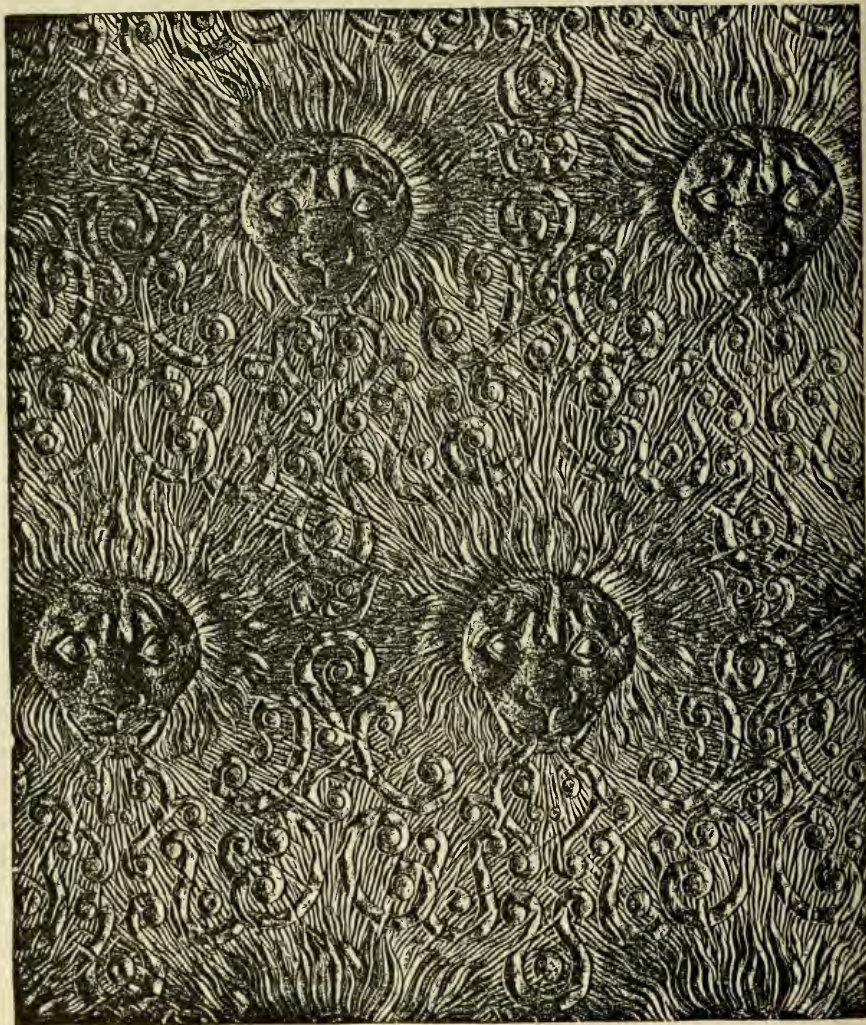
economy over all similar materials when we can work directly upon the material without painting; hence, for dark woods, dados and dark leather effects for walls, the material is at its best. When we have ceilings in high relief and carved wood treatments, Anaglypta bears off the palm. Its light color and light weight and moreover the beautiful designs in which it is produced for paneled ceilings makes it without rival. A few of these I have illustrated on another page. I have finished Lincrusta very cheaply and effectively by merely glazing over and wiping with dilute black japan; but this being thinned with turpentine is scarcely suitable for other than dado work, since it will dry too quickly for working over large surfaces. In the wiping we require old rags or cloth free from "fluffiness;" this we place evenly over a wooden block about eight inches long, three wide and one thick. Use the edge of the block with two hands and change the cover cloth as it gets saturated. Lincrusta ordinarily requires nothing to make it wear, and if a nice uniform finish is desired, use either "flat" varnish well rubbed with a cloth and a little paste beeswax previously melted in turpentine. Never use bright varnish over these materials unless the position of the work calls for its frequent washing, or unless we are finishing in effects of tiling or majolica.

The remaining portion of our space must now be devoted to the actual methods and processes. Although I shall chiefly connect them with Anaglypta, it will be understood that these details apply generally to Lignomur and Cordelova, and also to Lincrusta when the native color of the material is no barrier to its use and treatment. Although Anaglypta may generally be painted to "bear out" in one coat; a coat of size is always advisable. When the material has been hung in its place, whether ceiling or wall work, the joints will naturally be more absorbent; but a coating of strong, warm glue size, to which a little gilder's whiting is added, should be spread. Size so used, especially if it be necessary to stipple the work, has a tendency to froth under the brush, and to remedy this add and well mix in about one-eighth pint of turpentine to the gallon. In most cases the surface can now be grounded for the graining colors; but if the joints want much puttying this should be done in suitable color first and the putty touched over with white shellac. The ground color paint should be nearly flat and must be well distributed and stippled. If we want a light or new carved oak ceiling effect, the ground color only needs to be a light tint of ochre, just a decided cream. In this matter of grounds, for ceilings especially, *always keep on the light side*. In the graining or oil "scumbling" process, the color will have to be quite a wash, it needs no excess of dryer or other megilping agency, and should be about one-half each oil and turps. The best way is to put out enough liquids, add a little best japan, or paste dryer, and then stain the liquid to our desired effect. Brush over the surface very barely, stipple free from "cloudiness," then wipe the raised parts softly, to avoid a painty appearance, as before advised with block and rags. When

No. 87.

HANGING.

Pattern—REPOUSSÉ WORK.



SCALE 1-4 ORIGINAL SIZE.

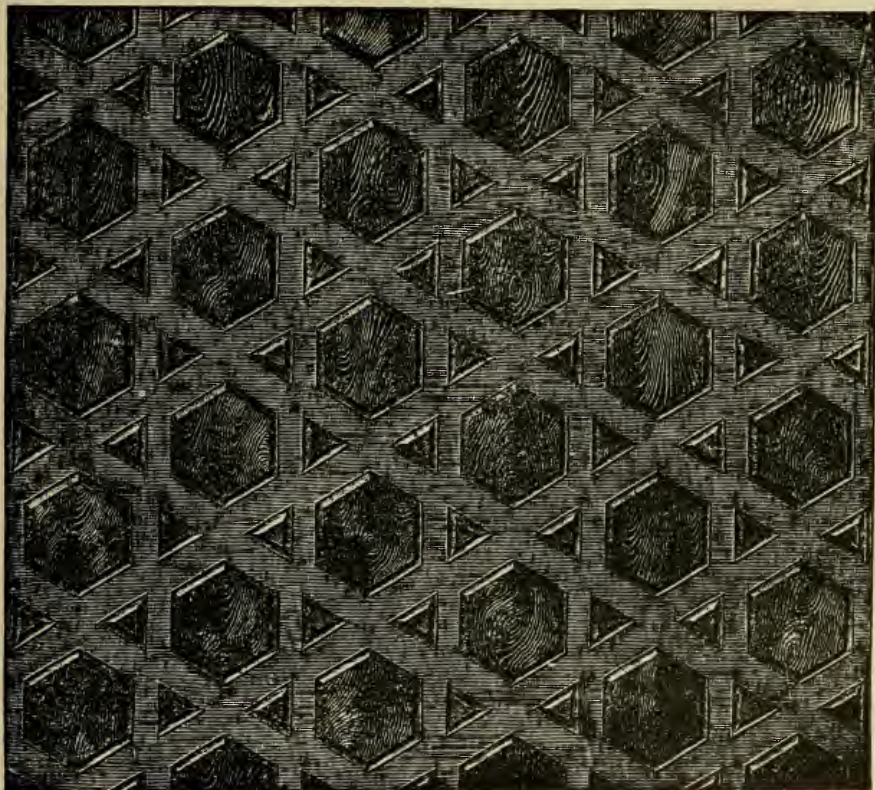
PATENTED.

LINCUSTA IMITATIONS FOR METAL EFFECTS.

No. 115.

FILLING.

Pattern—WOOD.



SCALE 1-4 ORIGINAL SIZE.

PATENTED

LINCRUSTA WALL PANELING FOR OAK EFFECTS.

this is dry, water scumble with beer-water, umber and wash-leather and finally rub with waxed cloth. The chief dangers are: (1) getting grounds so dark that the graining color must either be very strong and opaque, or so light that the stipple effect shows little contrast or transparency; (2) cloudiness from uneven spreading and stippling; (3) painty effect from unequal or too clean wiping off of the oil scumble. As the work proceeds it must be watched from the floor; the staging height will not reveal these troubles. In the design marked No. 121 I have made handsome ceilings of carved oak with the panels marked A in either old blue or sage green Morocco leather and the intervening beading gilded. The panels are done the last thing as we only have to "cut up" once; make the color like thin paste, using dry pigments, turps, japan and enough oil to give an egg-shell gloss; paint in with large fitch and stipple coarsely with a small round bristle paint tool. This Morocco leather is an excellent and cheap thing for any recessed wood paneling and forms a splendid ground for gilding on, in effects of stamped and ornamented leather.

In putting in opaque colors on parts of a design we may often make a stencil of *Anaglypta* and thus execute contrasting effects very cheaply. The material must of course be well oiled and cut just as we prepare stencil paper; but the stenciling need not be clean and sharp since a final water scumble will soften the edge of the two tones. This stencil method comes more useful for decorating the thinner wall fillings in old leather and metal imitations. The colors of old leather are much akin to the woods, but the leather water scumble must be black, and a generous quantity of it must remain in the recesses of the design. Again, all leather effects must be finally wax rubbed to get the right gloss.

In imitating tiles and majolica, the ground color must be white or cream. Upon this use oil scumble of transparent pigments, such as Prussian blue, the siennas, umbers, etc., wiped as in wood colors. Then varnish with a light, high gloss copal, and finally water scumble with black. In *Lignomur* I have made good tiled dados by oil scumbling directly on the absorbent material and wiping, then finishing with white shellac—two simple processes.

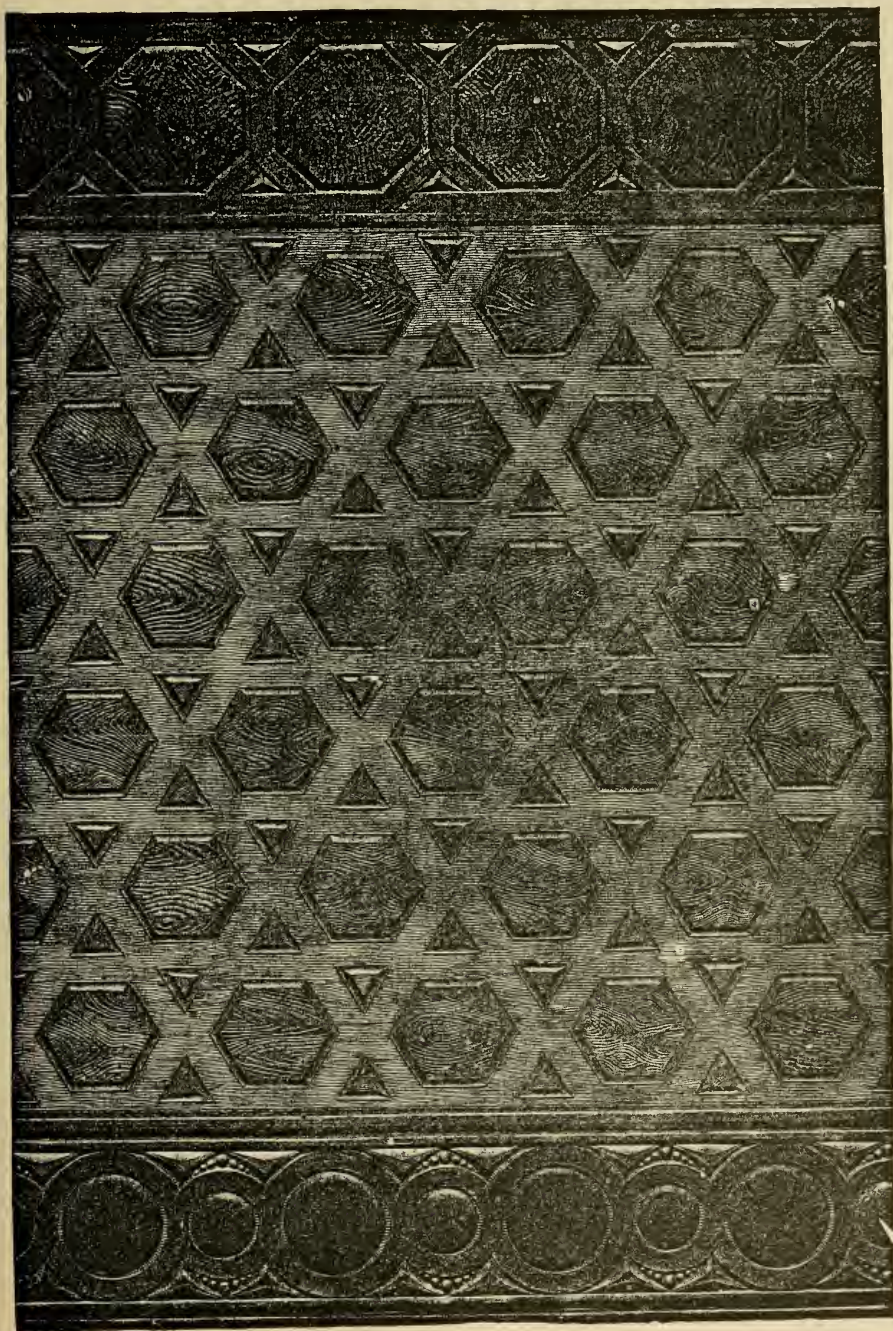
I have a panel of the *Anaglypta* renaissance dado No. 84 in my office, which no visitor, whether lay or professional, has failed to greatly admire. It is a rich harmony of majolica in transparent broken tones of blues, greens and siennas, the heavy black water scumble in the recesses giving it much of its charm.

Coming to metals, all Japanese leathers and relief materials are treated with a specially made white metal and then lacquered to any tone of gold color. Silver leaf quickly tarnishes and is never used. In the *Anaglypta* factory, where a large staff of men and women are employed decorating for the trade, there is a machine which metals twelve yards at a time. The metal is specially made in rolls like wall paper; the surface is first prepared and sized with white "coach japan" gold size and the machine does the rest.

DADO.

No. 1090.

Pattern—WOOD DIAPER.



PATENTED.

LINCRUSTA DADO FOR OAK EFFECTS.

For decorators' ordinary use this white metal is put into books like gold leaf; both metal and lacquers are extensively sold to decorators by the Cordelova company. Bronze powders may be safely used providing the quality of bronze is A1, and it is either mixed with white shellac or coated with a clear lacquer afterwards. Water scumbles may be made from all dry pigments of good quality with fuller's earth and beer wash—the greens when used in this way over bronze metal treatments giving a very realistic touch to them. In metal effects three shades of gold lacquer are generally used, from the bright lemon to the deep "old Italian" tone. Whenever possible decorate these materials upon the bench. Have a paint brush to convey the color to the surface, but for spreading and distribution use the flat shoe brush. When the joints have to be imperceptible the decoration must be done on the wall, after joints are puttied; but in imitation leathers the joint is no eyesore, as the real thing would be so, or much worse. In any case give the final touches and water scumble after being hung in place.

With these hints and ideas before him, the practical man will now be well equipped for any imitative demands that may be made upon him; whilst the short chapter of tried and proven receipts will prove invaluable to those decorators who prefer their own brand to that of the "ready-mixed."

CHAPTER XVI.

POLISHING AND VARNISHING IMITATIONS OF WOODS.

POLISHING and varnishing are two processes which, when applied to furniture and woodwork, cover the whole range of finished surfaces.

Although both the words "varnish" and "polish" seem inseparable from a high gloss and smoothness of texture, they are as commonly used to express the opposite, such as "flattening varnish" or a "dull polish." But the term "polishing," when applied to hardwood, may refer to two methods of obtaining an agreeable finish, which have very little in common, namely, "French polishing" and "friction polishing"—if one may so term the latter rubbing process.

A good varnisher or polisher of woods must bring to bear upon his work faculties of care, patience and intelligence of no mean order. In Europe, the polisher's craft is a separate and distinct vocation, and his work rarely takes him outside the scope of French polishing, i. e., alcoholic varnishes applied with a wad or "rubber." Varnishing, by which we imply a brush-spreading process, is a term commonly applied to work coming under the management of the house painter, whose varnishes are of an entirely different nature to those of the European "polisher."

Now, the whole subject of finishing hardwood or wood-imitated surfaces is one of first importance to the American painter and grainer. Difficulties are ever arising in his every-day operations, often with costly and worrying consequences, which in many cases might have been avoided by a better knowledge of the work and materials. In this country hardwood finish is commonly interpreted as involving the three processes of "filling," "varnishing" and "rubbing;" and whilst I shall occupy the greater portion of this chapter with matter bearing upon that method, I am hopeful that a *resume* of the other best known finishes will be of some practical use as well as of interest to the reader.

Varnish is a generic term implying a liquid composed of some gum and its solvent. This liquid is spread upon the face of the work and when dry forms a translucent film thereon. To this extent we may say that every source of applied gloss or polish is a varnish—whether prepared from gum, wax, linseed oil, turpentine or alcohol. But now we must distinguish between them. For the present purpose, all varnishes may be considered in three classes; *expressed oil varnishes*, *volatile oil varnishes* and *spirit varnishes*. Some idea of their component parts is conveyed by these names; whilst the commoner trade distinctions of *copal*, *mastic* and *shellac* varnish respectively

are often used, which words refer to the gum in place of the liquid solvent.

Expressed oil varnishes, such as copal oil, are the best and most serviceable in connection with hardwood and graining. They are prepared by dissolving copal gum at a great heat, which gum is converted by turpentine into a liquid form and then thoroughly amalgamated with linseed oil. It would be useless here to elaborate on the process of manufacture; since, for whatever purpose oil varnish is required, it is most unwise for a painter and novice to attempt to make his own. Thirty or so years ago, when a painter's apprenticeship included an initiation into the process of boiling oil, making japanner's gold size, etc., the price of varnish was so high as to excuse the painter's effort of trying to make his own. Today keen competition has reduced varnish-making to the level of common profits and the experiment would prove a much more costly waste of time and materials than in the old days. My motive in considering the component parts of varnish is solely with a view to their more intelligent use by the painter. Copal varnish varies from a light amber to a dark, rich, brown tone, depending chiefly upon the whiteness of the copal gum. Manufacturers usually purchase the gums by the "parcel," containing copal of varying degrees of transparency. The lightest copal is usually the scarcest and consequently a genuine light copal varnish is an expensive product. The linseed oil, its quality and color, is equally of great importance with the copal; and I have been told upon excellent authority that the celebrated virtues of an English varnish, made by a firm whose goods are largely used in this country, are due to the fact of their employing only cold-drawn linseed oil in its manufacture. However, the main question of varnish buying is *price*; and when the painter understands the value of the manufacturer's raw materials, be it copal gum or Carolina resin, he is more likely to pay a fair price for an "honest" varnish and to get it.

It would scarcely be expedient for me to discuss herein the relative values of specific varnish-makers' goods, whether of domestic or English manufacture. The custom adopted by many manufacturers of giving their goods all kinds of fancy and misleading names is much to be deplored—although so far as the trade is concerned, it really assists the master painter to determine *what not to buy*. No man should purchase varnish who cannot personally test its value in a practical manner; and since the whole range of values is readily defined according to the constituents of the product, we may readily determine what particular varnish to buy and what its fair value is. Varnish, so called, which is prepared from common resin and which dries in about one hour and sets before one can finish a four-panel door, may be a commodity of some commercial importance for selling, but it is really a dangerous product for any reputable painter to use. It seems to me that the reputable manufacturers must suffer the most by producing such rubbish—since all prices and qualities are degraded by so absurd a priced varnish. In this matter of value again, it is somewhat strange that many painters are

prepared to pay high prices for imported varnish and yet object to giving the same for domestic goods. Although there can be no doubting this fact that age and experience are very important factors in the production of good varnish, there are many old established firms in this country who make as good varnish as can be made; but they cannot produce, ripen and retail a first-class article at the price of a second-class one, as many buyers expect them to. Again, it must not be forgotten that both the average maker and his "drummer" have little, if any, practical knowledge of the most important points on any varnish—its working and wearing qualities. These qualities it is the buyer's province to determine for himself, and no other party can do it for him. In justice to maker and user I will now give a brief notice of necessary varieties in copal or oil varnishes and their fair approximate cost to the master painter.

First in cost and quality we require a very pale varnish for all good *interior* work, either for varnishing over light paint, or imitations of maple and satinwood and which, with the addition of specially fine ground pigments, will make a first-class interior enamel. Such a varnish should dry within eight hours and should lend itself to after polishing in the best manner. Its market value would be from \$5 to \$6 per gallon.

Cheaper grades of interior varnish are made, equal in every respect to the above excepting in lightness of color. I have already explained why a light copal varnish is more costly than a darker one. For darker tones of paint and imitations of oak, walnut, etc., these cheaper grades are excellent; in many cases a darker varnish improves the color and mellowness of graining and similar woody tones. They range in cost from \$3 to \$5 per gallon. Of the same value we often require an interior varnish for church seats, floors, etc., which is made with special hardening qualities, since the ordinary interior varnish would soften up under the heat of the body. The foregoing cover the whole range of painters' requirements for inside work; whilst for outside and exposed surfaces we have a grade of copal goods identical in cost and color but prepared with a special view to withstanding the changes of temperature. Some painters that I have talked with have questioned whether there exists any material difference between the interior and exterior kinds. Although I do not profess to understand the intricacies of varnish-making, my practical experience of some twenty years points an affirmative reply to such questions in no hesitating terms.

Passing on to the volatile oil varnishes, this is a variety that is unsuited for woodwork. They consist of softer gums, such as damar and mastic, which are dissolved readily in the volatile oil—turpentine. They are usually the whitest varnish made and are employed for varnishing wall papers, maps, paintings, etc. English Bath varnish is also of this volatile variety but is prepared from harder gums. All this class dry by evaporation of the turpentine and therefore set quickly. The damar varnishes cost about \$3 per gallon, but the white hard Bath varnish is worth at least double that sum.

We have now the third variety of varnishes to consider—*spirit varnishes*; and under this heading come innumerable preparations of orange and white shellac, benzoin and many other gum resins. The solvents are true spirits, such as alcohol, naphtha and benzine. In this connection it is well to recognize that painter's turpentine is not a spirit, since it will not entirely evaporate and naturally contains a certain quantity of resin. In Europe many of these spirit varnishes are distinguished as "White Hard Spirit Varnish," "Dark Hard Spirit Varnish;" and a thinner variety, usually prepared by the polisher for his own professional use, is known as French Polish. These spirit varnishes appear to closely correspond with the "white shellac" and "orange shellac" of American commerce—although I am inclined from practical experience to consider the former as manufactured with more care, perhaps because their consumption is on a much smaller scale. The use of lac varnish is of great antiquity amongst Oriental nations. Shellac can only be used by dissolving in alcoholic spirits, and it has unique and particular qualities which render it invaluable for polishing and varnishing furniture and other woodwork not exposed to the atmosphere. The Japs are credited with powers of using lac quite beyond our ken, such as varnishing a ship's bottom and a cooking vessel with its preparations. How far shellac is suitable for exterior hardwood finish I will discuss further on.

Assuming that we are now sufficiently familiar with the simple elements of all commercial varnishes, we will proceed to consider their everyday use and application.

Hardwood finish, as before noted, is a process usually consisting of filling, varnishing and rubbing to a dull polish; and it may be profitable to examine these details carefully. A "filler" is usually something that intervenes between the varnish and the wood. We know that the application of oil to any absorbent surface darkens it—whether the surface be wood, textile or paper. To all intents and purposes ordinary glue size is a filler, and a very useful filler for some purposes but scarcely for hard wood. The proper filling of hard woods, however, involves not only the intervention of a transparent film but an actual filling up of the open pores of the wood grain with some substance. In some hardwoods, fine mahogany, black walnut, and cherry, for instance, the open pores are much less in evidence than in oak or ash, hence less material filling is necessary. In considering interior finish, our aim must be to get a level and polished surface at the smallest consumption of labor and material, since durability is not likely to trouble us, as with outdoor exposed surfaces.

The trade in fillers in the United States is one of great magnitude and I suppose will continue so until the national supplies of hard wood become depleted, when painted and grained interior wood finish will come to gladden our hearts. For the great bulk of commercial pine wood finish, doubtless the fillers or sizings are indispensable to the painter. This class of wood finish is simply a commercial matter of spreading a stain, then a filling and

lastly the hard oil finish, so called—usually a preparation of common resin and volatile oil costing the painter from \$1 to \$2 a gallon, really worth about 75 cents.

The most simple finish is probably also the most antique—viz., oil polishing. This consists of well oiling the surface with pure linseed (some advocating its use hot) until it has absorbed all it can, after which the polish is obtained by continued and repeated rubbing, where possible using a padded block. Such was the way the old baronial hall and castle oak doors were treated in Europe in mediæval days, as indeed they are now in parts of Germany, Poland and Austria where labor is still of little value. In this method the wood cells are filled with and the whole surface protected by the natural film of the oxidized oil—the most durable and permanent protection the painter can produce. The large pores of the wood are not filled and although the want of smoothness would be a modern eyesore, it is without doubt the most natural, truthful and artistic finish of any beautifully figured wood.

Next to oil polish in simplicity, and probably just as ancient, is the wax polishing method, than which, even today, there is no better finish for floors. Beeswax is shredded up fine with a knife and dissolved in turpentine by hot water for safety, just as by the old-fashioned glue-pot. The working consistency is about that of stiff paste or soft soap, and it must be rubbed on sparingly with a flannel pad. The wax is a filler also, and the aim should be to rub as much as possible *into* the wood and put as little as possible on the *surface*. When once properly waxed, floors and furniture require but occasional polishing. This is done with hard bristle brushes of varying shapes and sizes. In the above named European countries the floor polishing is part of the duties of the men servants. They have a flat brush which is slipped on over the boot; and the polisher balances himself on one foot and works on the floor—with an action something between a scrub and a surface kick—with his other harnessed extremity. When his leg tires he “changes feet,” and although such work would prove very laborious to a novice, there is perhaps more in knack and practice than in muscular strength. These floors are the perfection of polish and slipperiness. In England and parts of this country, hardwood floors are treated similarly, but the polishing is usually done with a large flat brush, about 8 inches by 12, affixed slantways to a long handle and weighted with about 50 pounds of metallic lead. The weight of the implement suffices to polish; the “brush hand” only requires to push it backwards and forwards. Even this simplicity does not make it a very charming kind of work—having in my apprenticeship days “been there” occasionally, I write whereof I know.

Inasmuch as floor finish is an important item of our calling, the master painter must not overlook the virtues of wax polishing. If there is no objection to darkening the wood slightly, first rub it over with raw oil; let it stand not less than 24 hours for a bare oiling with rag; the more

oil applied the longer must be the interval before waxing and polishing. If nothing else can be obtained, a good hard shoe brush or scrubbing brush will bring up the polish if worked with plenty of elbow grease. Floors so treated can be cleaned off when dirty, with turpentine and re-waxed. If the wood cannot be oiled or if a speedy finish is desired, first prime with dilute shellac varnish and then proceed with the waxing. These directions will cover all other woodwork or furniture.

Shellac is doubtless the most popular finish in this country and justly so for interior work. It is easily managed and renovated and has no injurious after effect upon the color and grain of the wood. For cherry we can get a good finish with three coats of orange shellac, the first thinned down and used as a surfacer. Then rub down lightly with the finest polishing paper, give two full coats of shellac, and dull polish with oil and fine pumice powder. For filling such work, where paste filler is necessary I think the simplest thing is the best. Take, for instance, a little of either gilders' bolted whiting, silver white or any of the colored powder fillers and make to the right consistency with turps, enough japan to bind the substance and just enough oil to enable us to work it. Spread it with a soft brush; then draw off the surplus with a painter's broad knife, and finally clean off carefully with a soft rag or old cloth. I believe in first barely priming with raw oil, if time and the darkening of oil will allow it. If no oil, then first the thin surfacing of shellac before filling, as the filler will hold in position much better for sandpapering than if applied first. The filler must of course be tinted with oil pigments to match the wood, and if it is properly mixed, the finishing coats will stand out nicely.

Although plaster of paris tinted with dry pigment is used as a filler to a considerable extent with furniture finish in Britain, it is scarcely suitable for house work. The use of water would not affect wood already surfaced with oil or shellac, yet the plaster when dry would be absorbent and not capable of the simple finish as when filled with a filler of the above kind. After filling, interior work may be finished with two coats "interior oil" varnish; but this is more costly, or should be, as nothing but a good body varnish can be used and this again is much harder to rub and polish than shellac.

For outdoor finish, such as front doors, my experience and convictions are for good copal varnish—"first, last and all the time"—to use an expressive phrase. I believe a pine door, properly gotten up in white lead paint, grained and varnished with a first-class outside or carriage copal is the most durable finish for front doors in this country as in Great Britain. Second to that, I believe in a body of varnish alone. If possible, let the door be well oiled with a rag before being filled; otherwise give the work a priming rubber of shellac with a touch of oil on the rag to make it workable; fill as before directed, polish with paper and then varnish. Then dull down with fine emery cloth and pumice, and varnish again. Shellac is certainly not a good thing to body up a front door with—i. e., shellac as we buy it

ready for use. There is too much resin in its composition, either for external body or finishing. An experienced friend of mine has advocated finishing interior oak grained doors by shellacing them, and external oil graining without any varnish whatever. Whilst there is something to be said from his standpoint, it is not one that does justice to the painter and grainer. Graining that is not worth preserving with the best varnishes isn't worth doing at all, and since oak without overgraining is rather poor painting, I fail to see how varnish can be dispensed with. A well grained door that has been properly prepared and painted, looks nothing until varnished; but when it isn't so treated the varnish makes it a hideous object. So much grainer's work is mutilated today by bad painting, etc., that probably my friend is not altogether wrong. But on the point of durability as well as beauty, I uphold varnish—i. e., the right sort. If japanned goods, terra cotta pottery, etc., can be painted and varnished and then fired in a kiln, why shouldn't varnish stand the extremes of any climate? Why don't carriage tops blister? Because they are properly prepared and painted and because they are finished with genuine copal oil varnish.

As to patent fillers, I have little to say in their favor; i. e., of those which attempt to do the impossible—fill a hole with a liquid coating. They answer well enough for cheap work; but any master painter whose business and reputation is builded up and sustained by what he does, should use nothing which he does not understand. Faith healing may work all right with patent Sarsaparilla pills; but alas! when it comes to paint and painters' work, doctoring is a matter of hard facts. Let us remember that the ounce of prevention is better than the ton of cure; let us understand what we are doing and why. Finally, let us be willing to give that which we ask from others, a fair price for fair value given.

CHAPTER XVII.

"PATENT AND MECHANICAL AIDS AND TOOLS FOR IMITATING WOODS."

FROM the time that painted woods and marbles first attained to any important position amongst decorative and preservative processes, there has been a continuous effort of inventive faculty either to entirely supplant hard work or else to cheapen it by various "patented" methods and appliances. How far these different introductions have proved a success is a query which we can only answer in an indirect manner. Graining today has become more a commercially important process than an imitative art and handicraft; therefore from the purely commercial standpoint, these cheapening aids and substitutes are a success. When, however, graining is introduced with a view of directly imitating and substituting, in color and decorative effect, the real wood, then we have a high standard of skill which no inventions or patents—nothing but the long practice, skill and enthusiasm of the master hand and mind working in unison, can satisfactorily attain to.

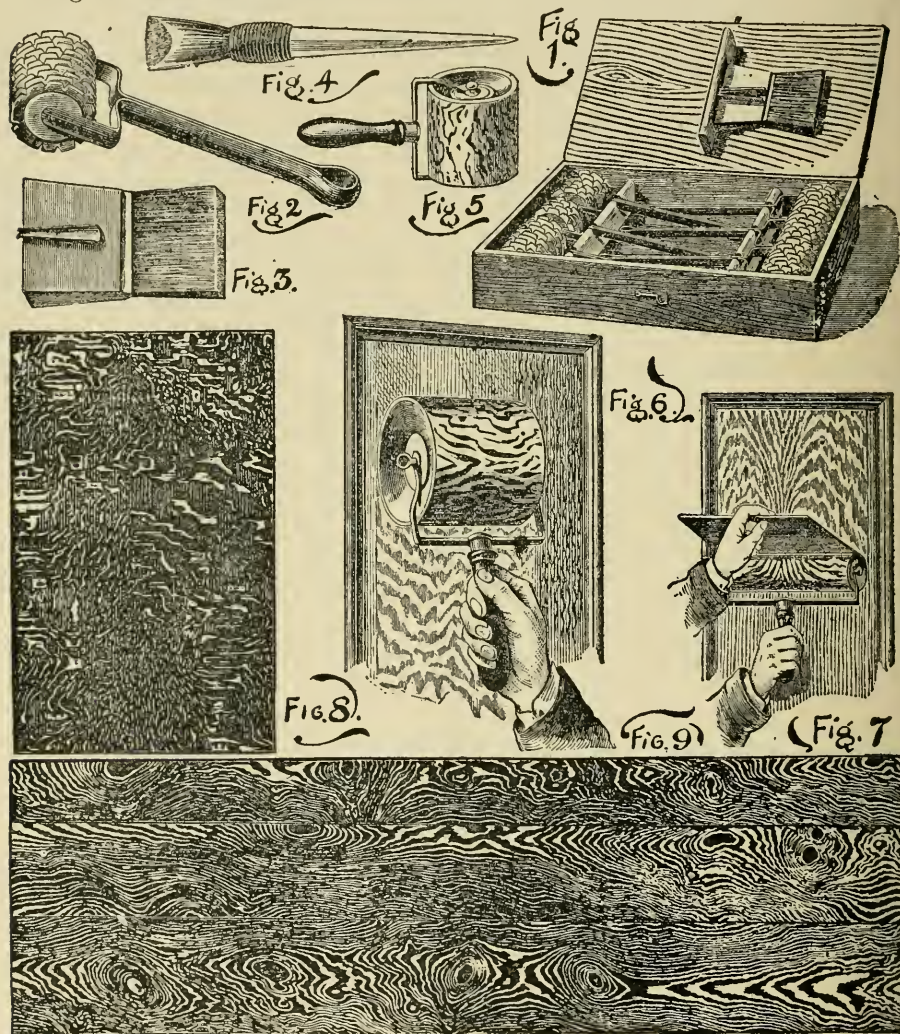
I am of the humble opinion that grainers, like poets, "are born." Most of us are aware, in these days, that the beautiful poem is just as much a creation of the dictionary and scholastic attainments as it is of poetic inspiration. So with regard to fine graining—study and continuous practice will work miracles of success in any direction, but the most successful and enthusiastic grainers I have known in a wide and varied experience are, as it were, "to the manner born." They have certain mental faculties to which graining strongly appeals, and such men, if accident made them painters, would, of themselves, develop under fair conditions into skilled imitators. Apart from this aspect, however, I strongly believe that graining, of a good commercial standard, at least, should be part and parcel of every house painter's training and qualifications. One of the drawbacks to the greater use and popularity of graining in America today, lies in the difficulty and cost of getting it done. To give ordinary kitchens, wainscoting, etc., out to an expert trade grainer who expects, and justly so, to earn from \$5 to \$10 a day, has this discouraging result—either the work costs the customer more than it is considered worth, or else the master painter is afraid to charge a fair profit on the grainer's bill. Therefore one feels that there should be no occasion for an expert's wages in "commercial graining." On the other hand, if a man of means has a dining-room finished in pine or cherry and he wishes to refurnish it throughout, artistically, in oak, here is

the place for employing the expert grainer, who will convert one wood into another—to all practical and artistic intents and purposes—at about one-fourth the outlay of making the real alteration in wood. Although, as I have expressed it, all fine grainers are “born,” one does not wish to convey the idea that to such men long practice and study are superfluous. The late Charles Reade, author and dramatist of no mean repute, in his popular novel, “It’s Never Too Late to Mend,” gives us a very good idea of the educated public’s idea of graining in general. Not only does he transform “Tom Robinson,” the adventurer and gold miner, into an expert grainer during his prison incarceration, but he also endows Tom with the remarkable faculty and power of taking haphazard any Bathurst tradesman’s shabby front door and converting it, right away, into a beautiful, finished specimen of oak or walnut.

This kind of thing may “go” in a work of fiction, but no further. Grainers must all go through a practical course of study and training which alone can bring out the natural faculties of the expert imitator. The old system of apprenticeship wherein the young painter and decorator had tuition and practice in graining, lettering, etc., is comparatively non-existent. With the exception of a few excellent trade schools, nothing is now being done in America to discover and develop the fine grainers of the next generation. One of the best grainers in this country, that I am acquainted with, and he a comparatively young man, has no apprentices; has had but one, I believe, so far during his career. That one is not, nor ever can be, an expert grainer, for the reason that the natural faculties for the work were not in him. It is, therefore a debatable point whether good can result from any lad being apprenticed to graining, wholly and solely, unless he has shown some decided preference for it and has previously qualified himself in good practical painting. Every grainer must first be a plain painter, and surely the right solution as to the future of fine graining can only be found by giving every painter lad, either by verbal or printed tuition, the *chance* of becoming an expert imitator, and with the prospect, at least, of his being able to execute clean and presentable “commercial” graining.

Any doubt as to the prevalence and importance of this commercial graining is rapidly dispelled when we consider the popularity and success of modern patent methods of imitating woods. The earliest of these was an effort to substitute the hand wiping out of “lights” and vein marks by a hand-roller. Figs. 5 and 6 of the accompanying illustration will explain their construction and mode of application; viz., a frame with wooden handle—similar to a paperhanger’s roller—affixed to a revolving cylinder. The surface of the latter is covered with a prepared leather, the figure is drawn on its surface and then all the surrounding “field” is chased away, leaving the design in relief. In working, the roller is passed over the wet graining color, already spread, and the lights are taken out by the suction of the leather. This class of roller was used for oak and similar imitations.

For imitating Spanish mahogany, the process is slightly varied. The roller is identical in shape with the paperhanger's roller; the pattern is embossed on a panel, as it were, of leather, which is attached to the roller at one end only. The leather is wound around the roller; and, commencing at the top, the worker cares for the loose end of the leather with his left hand, whilst the right hand works the roller; see Fig. 7. These rollers are known as



"Bellamy's" Patent, and are made both for imitating woods and marbles, by a Mr. J. F. Bellamy, of London. I have seen in print, the name of Kershaw associated with Mr. Bellamy as the patentee. Since there is but one holder of that name of any importance, viz., Thomas Kershaw, the grainer and decorator of forty years ago, in England, whose work has seldom

been equalled and never excelled, it seems strange that such a mechanical patent should have been anything but an abhorrence to him. When we consider how much irreparable injury has resulted from the absurd application of such "graining," by women and children, to sheet iron foot baths, water cans, trunks and similar articles of common household use, it seems hard to believe that one who did so much to elevate our calling in Britain should have been associated with this mis-application of talent.

Compared with later American roller patents, however, that of Bellamy's appears very simple. The former embrace methods of printing on surfaces with a flexible rubber pad, after the manner of a rubber letter stamp; of rubber rollers having pattern in relief and working upon similar lines to Bellamy's, save that the latter is only adapted to water graining, whilst the rubber enables oil color to be used. Then there is a method of transferring color impressions taken direct from real wood on a rubber surface and rolled on to the paint—after the old system of copper plate printing. All these methods testify very strongly to the usefulness of grained surfaces. Its application to cheap pails and wooden utensils, which receive hard usage and handling even before they reach the purchaser's hands, suggests that experience determined a figured surface wears and retains its commercial appearance longer than any plain color or other effect. All of these processes were undoubtedly prepared with a view to factory made furniture, etc., and therefore they have little interest to the house painter.

Passing from rollers and cylinders as a main factor we have next a series of inventions for graining by the use of paper. Two distinct ideas have been worked out in this line, one known as transfer paper, a self explanatory term; the other termed "Gransorbian," or English graining paper, whereby thick paper of a very absorbent nature was manipulated to answer the same purpose as Bellamy's mahogany leather panel. Both of these two patents were introduced with the idea of entirely substituting hand graining; both have met with a certain amount of success, although I believe Gransorbian has proved a financial failure, and has been discontinued for some few years.

In regard to the transfer patents, which have been applied to both oil and water graining, there can be no doubt that they fill a decided gap in the house-painting trades of America today—a gap, as before considered, arising from the general inability of a house painter to execute simple graining. Under no circumstances, however, can these printing methods be taken as equal to hand graining even of the "commercial" standard. Nevertheless they have doubtless helped many a struggling painter through with a job which he otherwise could never have undertaken; and for this reason we must not speak unkindly of them. Turning to Gransorbian, I well remember the editor of a leading English trade paper once wrote of it that "it was likely to create a practical revolution in the whole process of graining." This opinion, however, being published simultaneously with

the appearance of a whole page ad. was doubtless highly colored, unconsciously of course, by the sight of the latter. Anyhow, it gradually faded away from the pages of that trade paper, from sight and from the mind of our trade generally in England. Gransorbian had one special merit and that, the wide selection of figure it placed at the user's command. It was credited with being capable of serving from twelve to sixteen times on oil graining, and from sixteen to twenty times with water graining before the relief surface lost its power of absorbing the figure from the color-spread surface. It was made in fourteen varieties of woods. In use, the paper



CALLOW'S PATENT GRAINING PLATES IN USE.

was cut to size of panel or lock-rail, placed carefully in position, and then brought into contact by passing a small roller over it. The color was first spread and combed in the usual way, and it was recommended that plain combing alone be worked on the perpendicular stiles. In Figs. 8 and 9 I reproduce samples of Gransorbian figured oak. The long piece represents a repeat 78 inches by 24 inches. This cut into three, as indicated, gives some 20 feet of running "sap" oak—as it is called in Britain—and it is interesting and useful in this little book to the student for practicing the growth and arrangement of "heart" oak figure. Fig. 8 is an example of

Gransorbian in quartered oak, also useful as representing a panel of natural looking and well balanced champs.

We have now before us in the adjacent illustration an example of another graining invention. In this the patentee has adapted the ancient process of stencilling to that of wood imitations; saving that instead of the color being stencilled on, it is stencilled off. This patent is essentially American and, like most American notions, it "gets thar." Mr. Callow, the inventor, is evidently an experienced grainer himself, judging by his pamphlet of instructions for graining with his plates. Were I asked which one, of all graining patents so far produced, is the most practical and serviceable to the house-painting trade of America, I should unhesitatingly select this one. I do not fully endorse all the inventor says and claims for his process in every little detail. I do not think any grainer of average ability could do a door quicker with stencils than by the proper method; nor do I think it wisdom to use boiled oil in place of pure "honest linseed" for graining color. Stencil-plate graining can never equal the fine work of the expert, even if an expert use the plates—probably Mr. Callow neither wishes nor cares that it should. He has seen the opportunity and has seized it. American machinery and appliances have enabled the inventor to put his ideas on the market in a practical and economical form; and so long as the average house painter's abilities do not include commercial graining, Mr. Callow's process appears to be the best substitute—best with regard to effect, the trade's reputation and value for money. One can but wish the inventor a good financial harvest while the present conditions last, and at the same time hope that the next generation of painters will be able to do better graining without stencils.

So far we have been discussing those patent ideas in wood imitations which the expert grainer would turn from in contempt or derision. Now we have a few items which are considered valuable and legitimate aids to the hand worker.

Although we usually associate fine graining with the quality of free-hand work, even the grainer would come badly off without his combs. Figs. 1 and 2 illustrate a patent roller comb which very few expert, or "trade" grainers care to be without after once using it. Notwithstanding this English patent has been in existence for some twenty years, I am sure that there are many in the trade who are unacquainted with it. The rollers, as now constructed, have iron handles, between the extreme sides of which a small roller, or axle, is fixed and the metal discs revolve loosely and independently upon it. The discs are of sheet zinc, stamped out and the edges afterwards notched to make a series of short, fine lines.

I have known many grainers to make their own combing rollers, and have seen attempts to use leather discs; but like most modern *tools*—not "paints"—the factory-manufactured article is usually the cheapest and often better than the individual product. Fig. 1 shows a full set of these tools of

varying widths, and the feeding brush which charges the discs as they revolve. Fig. 3 illustrates the feeding brush, and Fig. 4 a partly worn painter's tool which many grainers use with the small-sized rollers. I have in earlier chapters explained how steel and leather combs are manipulated in order to obtain the effect of those dark pores we see in real oak and some other woods, the combs being used *before* the champs, or lights, are wiped out. When using rollers, the method is reversed. In the first place our graining color can be used thinner and without excess of dryer (excess of *anything* is bad) or without the introduction of any megilping factor to hold the color in place after combing. With the roller-process we carefully spread the color, wipe out figure and then let dry. Then overgrain or shade in water color and finally roll on the grain or pores in oil graining color, usually quick-drying burnt umber. Where the dark pores run on the wiped champs they must be gently and cleanly wiped off; if work has to be overgrained and varnished at once, water color can be used for rolling. It must, however, be remembered that water color pores could not be removed so readily from the lights, there being some risk of also disturbing the water "shading" or overgrain.

In working the roller, the feeding brush is first charged and then placed against the roller with the left hand, where the metal attachment holds it. The right hand holds the roller, the left still on the feeding brush, and the discs are caused to travel *up* the panel from bottom to top with slight but steady pressure. A useful roller is one 2 inches wide and for which the worn-in paint tool can be used. After rolling, the pores should be slightly softened lengthways with badger, or soft hog-hair tool. This takes the "hardness" off the printed line, and the difficulty of water-color pores drying before they can be softened is another reason why oil-color is used. The rolling must be done cleanly and running regularly with the grain of the wood. Although an English patent (the invention of Mr. William Jones, of Manchester, England, an expert grainer of the "old school") and probably only manufactured there, these tools can be obtained in America from a well-known New York dealer.

The process of graining woods with dry-color crayons is, I believe, much in vogue in the western states. Although I have some knowledge and experience of the use of colored crayons in painted imitations of marbles, their application to woods, and oak especially, is, I believe, entirely foreign to most British grainers. The use of crayon for imitating oak would appear especially strange to the latter, whose main and almost sole idea of grained oak is the quartered variety. When, however, one sees how large a part "heart" of oak or "sap," as the Britisher terms it, plays in American furniture, one can also understand that sap graining should also be more in vogue here. Although I have never yet met an expert grainer whose idea of the beautiful exalted the sap figure over the quartered, there are probably customers as well as grainers who prefer their oak-grained door to be

fashioned after the likeness of their real oak furniture. Under such circumstances, the grainer's crayon becomes a very valuable product, and one can understand the success of so excellent an article as that made by Collins Bros.

For graining in water color they are invaluable ; and rapid but excellent imitations of walnut, cherry, rosewood and heart of oak can be executed and varnished at one "journey." The method of working in oil is equally simple and effective for wainscots, baseboards, etc. Whilst the makers have the good sense not to decry or minimize the value of quartered oak graining, wherein the lights must be *taken out*, one can understand how crayon work is so popular, and especially in districts where graining is done not for imitation but for pure utility. Having personally tried and experimented with the crayons of the above make, one has pleasure in giving passing testimony to their merits.

Coming in close connection with crayons are the wood crayon pencils. These are used for working up fine knotted, or Italian, walnut ; for the fine veining, or overgrain, of bird's-eye maple ; for outlining inlays, etc. Whilst they are capable of doing quickly, in a competent grainer's hands, work which would take much longer if done with the fine sable, it is but right to give one's opinion that for the finest and best imitations no pencil lines can compete with the freedom and delicacy of a sable hair touch.

Having brought to the notice of the student all these modern appliances and mechanical methods, the question may come to his mind, Is it worth the time and struggle to acquire skillfulness in hand graining, seeing that so much of the former "goes" with the public today ? In answer to such, one would inquire whether the production of millions of chromo-lithographs, mock etchings, etc., has depreciated the value of artistic pictorial work. Surely not ! Moreover, let us remember that when hard woods become too scarce for common house interiors, then the beauty of the imitation as well as of the genuine thing will be more fully realized by the American public ; and those times are surely, if slowly, approaching.

CHAPTER XVIII.

ART AND HANDICRAFT—GRAINING IN THE LIGHT OF MODERN PROGRESS.
JOHN RUSKIN AND HIS HOUSE-PAINTER CRITICS.

IN the opening chapter of this practical treatise, I made some reference to the crusade against sham in general, and painted imitations of woods and marbles in particular, inaugurated by that eminent English author and critic, John Ruskin. Since my introductory graining paper was written and first published, the subject of the status and art morality of painted woods and marbles has again gone the round of many trade and amateur publications. The same old biased views on graining have been presented by editors and unprofessional writers; whilst, on the other side, the practical painter and grainer appears just as ignorant and abusive of Ruskin and his work as the former was twenty years ago.

It may be queried, Is John Ruskin and the warfare he has waged from the issue of his famous "Modern Painters," now over fifty years ago, a topic of genuine interest to the practical grainer and decorator? I would answer, most emphatically, Yes. However little the discussion may attract the grainer personally, he must be familiar with the points and principles involved, ready to explain or to respectfully defend his position as a skilled imitator, if only from the outlook of a bread-winner.

I do not ask the grainer and student to follow me herein through the old and well-worn controversy for the purpose of airing one's own version of the truth about art and graining. I would rather he thought out and studied it for himself. Certainly John Ruskin, the artist, the poet, the author and critic, whose works are *for all time*, needs no painter scribe to champion his cause. Quite recently a body of master painters in this country were instructed that the literary works of Ruskin stand monuments of his ignorance and inconsistency, and that their author is, briefly, "an ass." The social and intellectual position of the master painter is, and ever has been and will be, that of his own making; and whilst one feels profoundly moved to pity for those who, by their silence, meekly endorsed the above remark, its public utterance is surely a matter of humiliation to the craft at large, and ample justification for this article.

The question whether the grainer is an artist and his results "art work" is one which would doubtless have given Ruskin very little concern had he written in the "nineties" instead of the forties" and "fifties" of the present century. Strange, is it not, that the age which can produce so little, comparatively, finely painted imitations, should be so zealous concerning its

status? But the fact remains; and since, moreover, in other directions our craft has repeatedly been instructed that art, all visual art in fact, "is imitation," it may be well to first recognize the pure gem before we discuss its shams.

Of all simple-looking words in the English tongue, surely the monosyllable, "art" is open to the most diverse, indefinite and complex interpretations. Ask any two intelligent and fairly educated persons for an explanation—ask even two skilled master painters or grainers—and how dissimilar or uncertain the replies. One may reply that art is in painting, literature, music, sculpture—in brief, that art is the factor of beauty and excellence which, by its presence, exalts any æsthetic phase of human activity far above the level of simple labor. Another person will perchance make answer that there are many varieties of art, such as the art of painting, the art of music, the art of carving, drawing, and, to make this issue still more clear, I shall be equally safe in adding, the arts of the photographer, the lithographer and *the grainer*. But the very catholicism and range of such a list offends one's higher sense and consciousness of the eternal truth and fitness of things. Can we affirm that the difference between an Alma Tadema painting and a carefully "marbled" vestibule wall is but one of degree? Or, again, may we consider the photographer who copies, i. e., "imitates" in other material, an "old master's" oil painting thereupon, to take unto himself the genius of the painter? Certainly not, in neither case, since, however good the imitation may be, it can never take rank with the original creation.

The popular interpretation of art is *excellence of execution or of imitation*. Like many other popular impressions, this is far from being correct. For instance, because at harvest time the voice of nature conveys to us sentiments of a Creator's power, his love and his gracious providence, does it hold good that a pictorial representation of one such scene must perforce reflect these sentiments to us similarly? Will the solemn grandeur of the eternally snow-clad mountain peak or the smiling voice of returning spring be equally the attribute of a faithful pictorial transcript? Such thoughts bring their own ready decisions, for if art be indeed but imitation or reproduction, then the instantaneous photograph must be greater and truer art than any etching or mezzotint produced by imperfect, because human, handiwork. And beyond this, can Science but perfect her work and give us camera pictures of nature and humanity as correct in color as she already does in form, then the acme of such misnamed art will be attained; for pigment, brush and pencil will be as entirely superfluous as the handwork of the draftsmen.

By such inverse process of reasoning, although the production of sun pictures in nature's coloring is much farther off than the popular idea can grasp, we are convinced that art is neither the imitation nor the reproduction. Art and science have little in common beyond their great mission as translators of nature. Science deals with hard facts, taking nothing for granted

and assuming nothing, so testing and proving each stone that is added to its mighty structure of knowledge that time shall but season and strengthen it. But Art, on the other hand, does not concern herself with the exactness of reproductions and imitations, *as such*. The nearer to nature, i. e., the more purely deceptive the reproduction, the greater the sin against true art and true sense; and those who would honestly question this, must turn to the "life-like" wax-work figures of the museum and to the porcelain parrots and painted plaster dogs and cats for their art sustenance.

Passing now from the main question of painted imitation to that of its executive excellence, how poor is the measure of truth that is possible; for neither in shade, color nor delineation can the landscape be reproduced. The pen and pencil can but imperfectly render light and shade; and when the painter gives us harmonious color also, then just in the measure that that color is exalted in his work, line and shade must be subordinated. No man, not even the genius, can serve all three masters, line, light and color; he cannot even serve two faithfully. In color alone, how indescritably poor do the pigments of his palette compare with the purity and brilliancy of nature's chromatic scales! Art, therefore, is not the measure of excellence in drawing, carving, coloring or engraving; neither is art dependent upon such factors. These are but the attributes, the evidences, of *good craftsmanship*.

Art, as I honor it, as I have learned to know it under the guidance of our modern prophet and evangelist, John Ruskin, is a generic term of expressed *soul*. That which of itself has no shape nor any parts, but which may be made visible to our poor humanity through the genius, or, as Michael Angelo defined it, the "eternal patience," of the poet, the painter, the musician, the sculptor and so on. Let me strive to explain it in this way: There may be seen in the "fine art" publication stores of our great cities a large engraving of a well-known painting by Luke Fildes, R. A. The interior of a room in the typical English cottage is limned. In the foreground is a child's cot wherein lies, apparently "sick unto death," the "one little ewe lamb" of a poor laboring man. Seated by the bedside is a figure of matured and noble bearing, in whose hand lies the pulse of the little one, as with steadfast and immovable gaze the physician watches the turn of the crisis. Seated at a table in the shaded side of the room, with his head pillowed, with despair, on his arms, we see the father, and, standing beside him, the wan and worn mother. And as we pause and look on this scene, one can read the whole story. We feel as if we had spent with them the long, weary vigil by lamplight; we see the first rays of the rising sun shining through the diamond lattice window upon the bowed form of the father, and we take it as a happy omen. We know 'tis but a picture and a fiction; yet it has *soul*. It has that which speaks straight out to our common humanity, and we feel that from this delineation of a domestic crisis, the world is the better. Our family joys and sorrows are aroused and endeared;

the self-sacrifice and true nobility of this physician perchance symbolizes a still greater Physician; and we are encouraged to work and watch for the rising sun of bright days, for the one perpetual day.

What says Ruskin on the nature of true art? A thousand sentences all forceful and poetic, of which this is one, "Remember, therefore, always, you have two characters in which all greatness of art consists: First, the earnest and intense seizing of natural facts; then the ordering those facts by strength of human intellect so as to make them, for all who look upon them, to the utmost serviceable, memorable and beautiful. And thus great art is nothing else than the type of strong and noble life."

Having now, so far as lies in me, defined true art by this quotation and my pictorial allusion, let us consider how far such imitative work as photography, graining, plaster-cast making, etc., can be considered as partaking of it. Referring to the quotation, it may be conceded that skilled graining illustrates the first characteristic, "the earnest and intense seizing of natural facts." But there the connection ceases; the grainer and marbler does not "order those facts by strength of human intellect;" he reproduces more or less accurately, according to his skill as a craftsman, but his own soul, his individuality, does not shine out in his work. Has any man had his "heart strings" touched by a grained door or a marble panel? I fancy not. The only sentiment excellent workmanship can awaken is admiration for the quality of imitation. The highest praise it can merit is to pass for the impressionless, inanimate reality; for no sooner does man think to put some of his personality into imitations than he creates a lie and a falsity; he is merely setting up a stony idol of his own making.

I have heard discussed and have often read interesting, but I believe erroneous, ideas concerning how much or how little a painted work of pictorial art can reflect the soul, or poetic inspiration, of the painter; and of how far a grained door can be identified with its producer. One very able English grainer and writer has written, "All art, of whatever kind, is imitative, and even in its highest walks the painter must still draw inspiration and form from some natural type; and it is a questionable point with us whether we do not, in nine cases out of ten, attribute sentiments and expressions to a representative picture, which the artist never dreamt of when he painted it." These able contentions are, I believe, erroneous in several respects. For instance: In a work of art, the painter draws upon nature as a means to an end, and as the potter uses clay to make a vessel; whereas, to the grainer and marbler, the imitation, the lifeless clay, is the end in view. Again, any great work of art can rarely be limited to the expression of one great sentiment. It is rather like the oratorio of the tone artist, wherein is beautiful melody and powerful chorus, all combining to make up one grand theme, yet which, in its very working out, is full of truths and beauties which appeal to the individual with varying force.

Then, as to a grainer's style or idiosyncrasies, we have these just in

like manner and from the self same causes as are found in handwriting or in the way a man wears out his shoes. Such differences are but the unconscious and habitual expression of mind and matter, not the result of facts ordered by strength of human intellect, etc.

Painted graining and marbling cannot therefore be spoken and thought of as art in the same sense as art is possible in music, sculpture or paintings. To that extent, John Ruskin was and is irrefutably right. Granting this much, we can now take the other side of the question and endeavor to do justice to the use and practice of graining and marbling as a decorative and preservative handicraft.

From the purely imitative standpoint, graining has far higher claims for respect and attention than the mere processes of drawing, painting and sculpture; since an expert craftsman can imitate the grain, the color and the actual surface and texture of wood or marble so that the imitation serves the full purpose of the original. If graining be not art, then surely it is the material personification of decorative utility. Utility is the imitator's justification. The use of real woods and marbles in modern buildings is due to their permanent nature and their color value. To build a noble entrance hall and staircase, with real marble floor, columns and stairway, and then to plaster the walls and finish them in painted colored marbles seems, however, a folly and an inconsistency. Yet this is actually the case with the Marble Hall and Grand Staircase in Buckingham Palace, and this kind of thing was being repeatedly done under the late Prince Consort in those very days when Ruskin in his prime wrote and spoke so bitterly. When he wrote this sentence, "The grainer must think of what he is doing with veritable attention and care; and occasionally considerable skill is consumed in the doing of a more absolute nothing than I can name in any other department of painful idleness," Ruskin had graining in mental comparison with true art, that which has expressed soul. And his position was justifiable. When, however, he wrote, "There is no meaner occupation for the human mind than the imitation of the stains and stride of wood and marble," and many more equally hard and caustic sentences, we are but reminded that even John Ruskin was not infallible; that 'twere unnatural for him to speak as one of the present transient age and generation, and impossible for him to consider graining from the decorator's utility aspect. He spoke and wrote of art as of the eternal, the true and unchangeable; and I believe no just and high-minded man could today view the above mentioned uplifting by royalty of the imitation fetish as worthy of greater honor than the natural and original, without feeling the prophet had reason for indignation.

Since Ruskin's dictum went forth to the world, things have changed greatly. The truths of his teachings are universally acknowledged. Here and there mental pigmies, who know him not, nor can they realize the eternal truths and beauties of his art gospel, take delight in holding up the weak points and trivial errors in his books, just as may be done by the

depraved reader of the greatest of all books, the Bible. Ruskin lashed the architect quite as much as the grainer, and, for the matter of that no author ever criticised his own early work so keenly and mercilessly as did he, for instance, the "Seven Lamps of Architecture." (See preface to 1880 and 1890 editions.)

Our modern position in regard to graining and marbling has little concern with regard to Ruskin; it is with the architects, editors, amateurs and all such as affect art and who are under the impression that drawing and painting mean art. The architect is guilty of greater inconsistency in tolerating and in using sheet metal pressed into the similitude of tooled stonework, carved ornament and structural paneling. If the grainer's be a negative offence, the architect is a very positive sinner in shams. The decorative color value of imitations, its use as a means to color effect and combination, can be justified in the house or the public hall at any time. The grainer is safe so long as his work is controlled by the decorator who uses various materials, textures and painted effects to express one dominant sentiment.

Finally, the value of cultivating the faculty for drawing cannot be too generally recognized by painters of all kinds. In this matter, no man in modern years has done greater service to art and handicraft than Ruskin. But mere drawing is only a means of delineating and its value commercially and intellectually the same as penmanship—apart from soul, or individuality, no more nor no less. Musical theory will not alone produce tonal art, nor pencil and brush work an artist.

It were wise that the modern painter and decorator, recognizing how seldom true Art comes within his possibilities, should comport himself with patience and humility towards her. And for the nation at large, one feels the great desideratum of modern life is a knowledge of the true and beautiful to take the place of art cant and affectation, to the end that the nutriment which today goes to the production of purposeless mediocrities on paper and canvas may be diverted into the thirsty channels of national applied art and craft work.

CHAPTER XIX.

THE MODERN DECORATIVE VALUE OF WOOD COLORS, WITH NOTES ON HARMONIOUS COMBINATION—SOME IMITATORS' PRACTICAL RECIPES.

HARMONIOUS color is the all-important factor of modern decorative art, and the grainer who can bring to bear upon his imitations a knowledge of their color value as part and parcel of a harmonious color scheme, will have a legitimate claim to the title of artist. A feeling, or faculty, for good color will be developed in any grainer who has studied at the only good school, Dame Nature's. But this attainment which I term "good color," has usually no application beyond the actual tones and color values of his imitations; he is satisfied if his graining be good and natural color of itself, and he seldom considers the matter further. Much of the condemnation that graining has brought upon itself may be traced to two weaknesses; firstly (paradoxical as it may read), from its very strength and perfection of imitation, which has often assumed a degree of display altogether out of proportion to its value as a decorative and useful means to an artistic end. The second reason I have found many examples of in "high places"—the failure of proper color toning to the room in its entirety. There are many grainers who would scorn the idea of a layman or even a grainer knowing more about the desired color than he himself; but inasmuch as the grainer gives his mind so much to the natural and imitative idea, he is liable to overlook contrasting mass colors which the eye of a colorist at once. It is therefore well that the grainer should realize the artistic possibilities of grained color, to the end that he be not the slave but the master of his own imitative faculties.

The color of grained oak, even in good-class work, is usually but a question of light, medium or dark. If the work be natural in color, there are few decorative schemes with which it is discordant, I grant. But we cannot be satisfied with such a negative standard. How many distinct color effects, for instance, can be produced within the range of light oak? Probably a hundred, ranging from soft and mellow to brilliant, varying from warm to cool, all within the possibilities of polished natural color. Turning from oak to mahogany, we have a wood, to my thinking, where-with a wider range of color is possible and the grainer's responsibility greater. No further argument is needed to uphold this contention, that the exact tone of grained imitations is of equal or greater importance than the tint of the ceiling or the exact tone of the walls.

To the everyday trade grainer or to the student striving to uphold the grand old standard of all-round skill in painting and decorating, there may seem little to encourage him in placing so much weight on his color. Perchance he gets a call to grain oak a front door grounded, forsooth, in one round coat with the same fatty, "lousy" aggregation of evils as the clap-boards have been covered with. Or maybe the color is medium chrome yellow or else a floor-cloth brown—anything save a smooth, opaque, nicely hardened ground of freshly mixed tinted, strained and properly spread paint. Under such conditions, graining is an impossibility; the workman loses enthusiasm, his standard of work gradually falls and his art and craft become to him but a question of "— cents per yard, super." But there are times, as most of us have found, when that knowledge of color harmony (which, after all, like virtue, is its own recompense), has proved a source of strength and profit; the occasion has come for a good imitator, and great has been the satisfaction all round when the grainer, Ruskin notwithstanding, could "color" and could give the reasons for the faith within him. The difference between writing on graining and on harmonious color as related thereto, is a very wide one. The pages of *THE WESTERN PAINTER* make it possible for one to describe by illustration exactly how "heart of oak" may be wiped, and to show by photographic reproduction how wood imitations take an important share in modern interior decorations. In dealing with harmony of color, there is no link of certainty between author and reader; both may mean the same, but the written language of color has never yet progressed beyond the "vowel" signs. As a foundation for the grainer's individual study, I give a list of the most familiar hardwoods, appending to each those contrasting mass colors which, singly or combined, will produce harmonious color schemes.

HARD WOODS, NATURAL AND GRAINED, AND THE CONTRASTING MASS COLORS WHICH HARMONIZE WITH THEM.

Light oak, with soft, warm greens, deep rich reds (neither pure nor purplish), and peacock blues; gilding.

Medium oak, with stronger and browner greens, richer reds and lighter and greener tones of blue. Deep gold.

"*Antique*" or *fumigated oak*, with any or all of the old Gothic colors of sage green, deep peacock blue, saddened yellow and dull red; no tints other than ivory. Old Italian gold and bronzes.

Maple wood and satinwood, with delicate greys, either silver, ærial or indigo tinted, ivory tints of raw sienna and raw umber and subdued tints of old rose. Silver or gold metals.

American Walnut, with rich, deep yellow or old gold, and old reds and blues into which the brown hue of the walnut distinctly enters.

Cherry, with turquoise and greenish blues, preferably in draperies or

mottled wall treatment, with olive browns and transparent yellows and metals.

Mahogany, with rich, deep olive greens and all yellow tones from old gold to cinnamon brown. Soft neutral red tints to deep, pure pigments in tone with wood. Rich gold.

White wood, with cool ivory and any light tints of ochre, Venetian red, green and blue which are toned with raw umber.

Ebony, with all rich reds and yellows; with deep gold and ivory.

Rosewood, with tones of empire green, soft old rose, old golds and ivory tints.

There are a few sentences worth adding to the above: Always aim to have affinity of *hue* between mass contrasts; for instance, a decidedly warm or *yellow-toned* green with a decidedly *yellow-toned* oak, or a purplish, old, deep blue requires deep and purple-toned mahogany or cherry to obtain the best results. Then, in matters of depth or shade, try to make the wall color play, as it were, first fiddle; the less brilliancy wood color exhibits, the less criticism it will challenge as an imitation—and discretion was ever the better part of valor.

In the accompanying illustration we have a photograph of a dining-room corner, giving ample evidence of its treatment upon artistic, yet unpretentious lines. Here we have a modern phase of imitative work, requiring all the technical knowledge, if not the executive skill, of the expert grainer. A dado in highly raised panel treatment is capped with a three-inch surbase molding, and the whole, from floor to molding, is in antique oak effect. Above this we have a specimen of the modern English school of wall paper design, in varying soft shades of warm green. At the top we have another three-rail, or picture molding, of antique oak, making an excellent base for a twelve-inch highly raised frieze in carved oak effects. Above the frieze comes a massive enriched cornice, originally of white plaster but now converted into a solid-looking ceiling frame of oak and gold. Next the ceiling we have a simply tooled margin of oak; then comes the wooden ceiling molding which forms the boundary to the paneled ceiling of *Anaglypta* (No. 164) finished in an effect of carved oak with plain alternative panels of dull red leather texture and these outlined with a fine beading of gold. The structural woodwork shows light oak color panels of incised design, the remainder stippled and bright varnished in antique oak tones. Although probably throughout this example not one panel of "champs" or vein was wiped on ceiling, woodwork or dado, its connection with graining and the grainer's skill cannot be slightly dismissed. To ground, glaze, wipe, comb, varnish, water scumble, overgrain with the patent combing roller, and finally to wax polish such a dado to an effect equal to the old real oak furnishings, requires a thorough knowledge of graining and graining colors. To carry out similar effects in frieze, cornice and ceiling, bringing out the design and main features by the aid of color, just as age

and wear would do, requires experience and judgment as well as imitative skill; and any grainer who has executed an oak ceiling in panels, will grant the technicalities of the operation are various. In its unity we have a decorative apartment, architectural yet homely in sentiment, rich in form and harmonious in color, but not suggestive of the café, three-fourths of its surface treated in imitative substance and imitative carving and yet disarming criticism by its very modesty and restraint of finish. Such appears to be the province of imitative painting—first, of itself made justifiable by the common sense advantages of economy, durability and fitness, and then in its relative color value, a thing of beauty and decorative worth.

In the special chapter on modern relief imitations, I have described the methods and material used in such work as that illustrated; and as promised, I now close this effort with a few useful recipes bearing upon our modern decorations. These being the direct fruits of long experience and professional usage, they may be depended upon by one's fellow craftsmen, providing they are combined with reliable materials and painstaking effort.

NOTES AND RECIPES FOR USE IN IMITATING CARVED WOODS, METALS, LEATHERS AND MAJOLICA.

Interior oil gilding size for yellow metals.—Take one pint best interior copal varnish, two pints boiled (not doctored) linseed oil, 4 oz. each of fat oil, light coach japan and yellow ochre, the latter of the finest degree of grinding. Mix thoroughly, strain through fine muslin and keep in air tight glass preserve jars. Should be fit for gilding on in 12 hours and keep its tack for 3 days. To quicken drying, add more varnish; to further retard it, mix in thoroughly a small percentage of pure raw oil. Stir well before using.

To gild large surfaces in silver or white metals.—Use the best white coach japan procurable; prepare the surface with a steel grey tint of flattening paint, and finish with a thin coating of parchment or isinglass size and one of thin solution of white shellac if the metal is to be decorated upon.

Spirit lacquers for obtaining gold effects.—To obtain rich and transparent colors ranging from pale gold to old Italian tones, and without much cost, infusions of these four coloring factors may be used, gamboge, tumeric, red sanders and dragon's blood. Prepare the color by simmering for 3 hours about one pound of each in 1 qt. alcohol, using a covered vessel and steam or sand bath to avoid the spirit's igniting. These four drugs will give tones from which, separately or combined, every desired gold color can be produced. After cooling and settlement, the clear liquid is drawn off and pure orange shellac varnish (preferably home prepared) is added to give the necessary body and wearing power to the transparent liquid. The exact proportion of shellac to stained liquid will be governed by the use to which the lacquer is put. If merely to get color, then the binding power, viz., the shellac, need not be nearly so much as when we are going to work over the lacquer with oil and water scumbles. The best drugs need scarcely

be insisted upon, cheap tumeric especially being a pilfall, as liable to fade out quickly.

Painters' lacquers or glazes for metals or woods are often prepared from good crystal varnish and turpentine stained with such permanent transparent pigments as the umbers, siennas, Prussian and indigo blues, etc. When gloss is not desirable, white laundress's wax may be shredded and dissolved in pure turpentine, thinned down to working consistency with turpentine and a little best copal varnish to act as a dryer or binding agent.

Painted majolica imitations for tile designs and dados.—Prepare the material with Glutol sizing and one coat flat white paint. Mix the semi-transparent colors separately in boiled oil and varnish. Paint in the different parts with desired color and soften with a grainer's badger. Get slight variations of color depth by wiping off the glaze on prominent portions. Varnish with a light, hard, oil varnish and water scumble with blue-black to which a little ale or vinegar has been added.

Imitations of old European leathers.—These are best when executed upon a material having sufficient texture to hold the water scumble, such as Cordelova, the chief purpose of which is to give the material age and old color tone. Cordelova leathers are treated in various orthodox ways. I append two. The first is worked upon a ground of pale yellow gold, or lacquered aluminium. After the lacquering, scumble the surface with transparent, sagey green made from Vandyke, raw sienna and indigo or Prussian blue. When dry, paint in the background with a strong tint of lemon chrome flatting and finish with a water scumble of burnt umber. This latter must be at once wiped off cleanly, leaving the color only around the ornaments and a slight tinge from its presence to tone down the lemon ground. Old Spanish leathers are usually treated *vice versa*, with colored relief ornaments upon an old gold ground. The metaling and lacquering are first done, care being taken to get an old rich lacquer tone. The ornament is now painted or stenciled in by hand in various semi-natural colors and when dry, high lights of color are added. Oil scumbling of rich brown color is then spread, and then a final scumble of Vandyke, or toned black. The scumble must be wiped carefully from the metal ground each time and the whole varnished with dilute crystal varnish. When hung, or rather nailed in place, as this often is, a rubbing with waxed cloth gives a very soft, leathery gloss.

Effects in carved woods.—Little more need here be written concerning woods. The points not already touched upon are such as concern the intelligent wiping and scumbling. In wiping oil glazes the design must be brought out by leaving the scumble in the right depths according to the modelling and lighting. Again, it is very easy to wipe off too much of the oil scumble, the effect of which on "carved oak" ceilings is to reveal a crude "paintiness." Oil graining color, although, to my mind, a poor preservative finish for grained external doors, requires no varnishing on ceilings. The

water scumble of Vandyke and fuller's earth and the final rub with wax cloth cannot be bettered. The stippler for painting and scumbling is a great advantage.

A reliable crystal varnish.—Dissolve 4 lbs. damar gum in 1 gal. pure turpentine. The gum will dissolve without any forcing, but if required for early use, it may be melted by hot water applied on the old glue-pot principle. This is an excellent varnish for glazes and other purposes connected with metal and leather effects.

An enamel oil for mixing with varnish.—Take sugar of lead, 28 lbs; white sulphate of manganese, 7 lbs. Crush to a powder and well mix. Put this into a small barrel or oil vessel and pour on 4 gals. pure raw oil. Well stir at intervals for three or four weeks. Run off all that is clear, and lay by for use. Take the fine, thick white off—4 oz. of this will dry 7 lbs. of paint. Put in more oil until the supply of drying factor is exhausted. This is a splendid drying or enamel oil for outside ironwork or woodwork, and gives greater gloss, elasticity and body than does adding ordinary varnish to paint. One pint of this oil can be added to good oil varnish with benefit to its working nature and elasticity—*providing always* the raw oil be the best obtainable.

A reliable and inexpensive japan for grainers and painters.—Two pounds ground litharge; 2 lbs. red lead; 1 lb. sulphate of manganese; $\frac{1}{2}$ lb. sugar of lead. Mix these to a paste with light coach japan. Put the paste into a gallon jar and add $\frac{1}{2}$ gal. pure turpentine. Let stand and stir occasionally for three days. Pour off the resultant liquid—a first-class English "Terebine." Pour in another half gallon of turps, well stir and repeat the results for the second and third times, using the same first lot of oxidizing chemicals, after which they will be exhausted. In large quantities this is a money saving recipe.

To bronze interior metal work.—Take black japan and add sufficient green pigment to make the desired bronze hue. Paint the articles, and when nearly dry metal the high lights, using the best gold bronze applied with a small piece of unwashed chamois skin; finish with a coat of hard-drying, clear varnish to which a little dry bronze may be added with advantage.

"Dead black" for interior wrought ironwork.—Four parts turpentine; 1 part black japan; 1 part ivory black, ground in japan. Dries in one hour and will rub to a soft, metal polish with dry rag.

[FINIS.]



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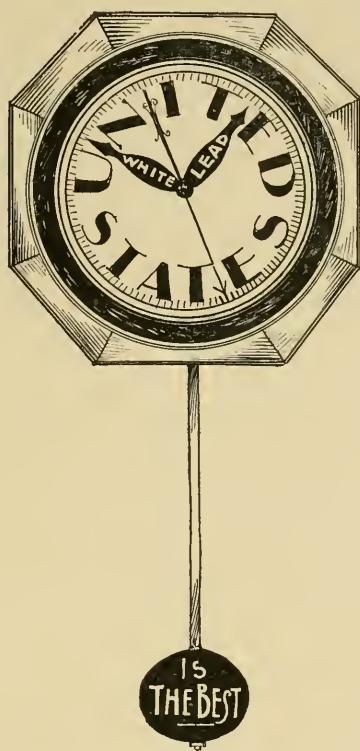
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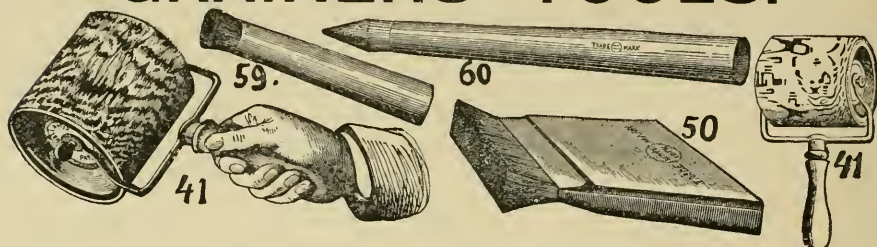
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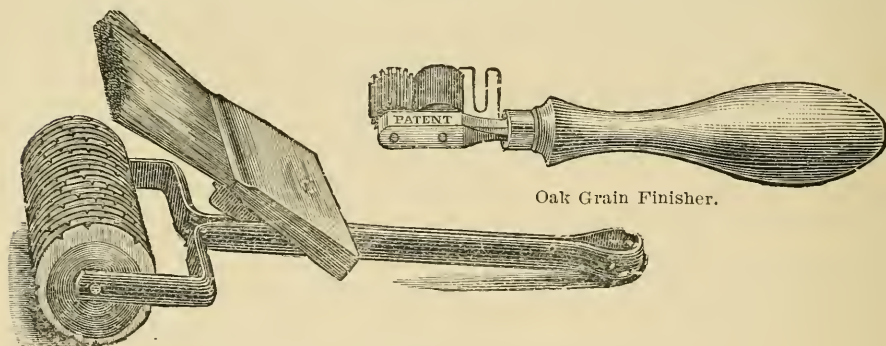
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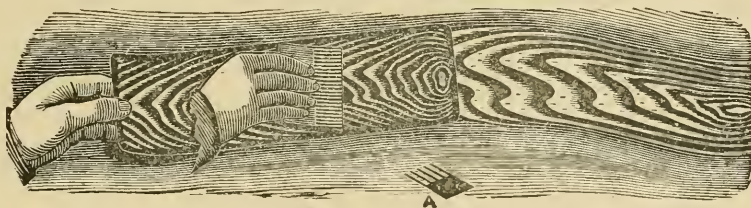
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